THE POTENTIAL OF UTILIZING AUGMENTED REALITY IN TEACHING IT STUDENTS IN A MILITARY INSTITUTION

ПОТЕНЦІАЛ ЗАСТОСУВАННЯ ТЕХНОЛОГІЙ ДОПОВНЕНОЇ РЕАЛЬНОСТІ В НАВЧАННІ СПЕЦІАЛІСТІВ У ГАЛУЗІ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ У ВІЙСЬКОВОМУ ЗАКЛАДІ ОСВІТИ

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The article examines the potential and possibilities of integrating Augmented Reality (AR) into English Language Teaching (ELT) for Information Technology (IT) students within military educational institutions. It discusses how AR can revolutionize the educational process by engaging learners through immersive and interactive experiences. This study examines the pedagogical benefits of Augmented Reality (AR) in English Language Teaching (ELT), including its accessibility, engagement, interactivity, and collaboration features. It also explores various applications of AR, such as AR books, gaming, discovery-based learning, object modeling, and skills training, based on a thorough review of existing literature and research. The article discusses the potential of AR applications to transform traditional teaching methodologies. It proposes the complementary integration of AR into language teaching and learning to better accommodate the unique learning preferences and digital consciousness of IT students who are often digital natives and may prefer learning through hands-on, experiential, and technology-mediated approaches rather than passive listening or reading. Traditional methods may not align with their preferred learning styles and preferences. AR can simulate real-world situations that military IT students may encounter in their professional roles. This includes communicating with foreign counterparts or interpreting technical manuals in different languages. By practicing language skills in relevant contexts, students can develop practical language proficiency that is directly applicable to their military duties. The study also acknowledges the challenges and limitations associated with the implementation of AR technology in educational settings, and offers insights into potential strategies for overcoming these obstacles. This article explores the potential implications of AR in language education, with a focus on leveraging innovative technologies to enhance learning outcomes and meet the evolving needs of learners in the digital age. The article suggests that AR has the potential to transform the educational experience and foster a more dynamic and effective learning environment for IT students in military educational institutions. By embracing AR as a tool for innovation and pedagogical enhancement, educators can empower learners to engage with language in new and meaningful ways, ultimately fostering a more immersive and impactful learning experience.

Key words: *Augmented Reality, teaching English, military students, means, possibilities, restrictions.*

У статті розглядається потенціал і можливості інтеграції доповненої реальності (AR) в процес навчання англійської мови (ELT) курсантів, які вивчають інформаційні технології (IT) у військових навчальних закладах. Обговорюється, як доповнена реальність може революціонізувати навчальний процес, залучаючи слухачів до інтерактивного та захоплюючого досвіду. У цьому дослідженні розглядаються педагогічні переваги доповненої реальності (AR) у викладанні англійської мови (ELT), включаючи її доступність, залучення, інтерактивність і можливості взаємодії. Вона також досліджує різні застосування AR, такі як AR-книги, ігри, навчання на основі відкриттів, моделювання об'єктів і тренування навичок, на основі ретельного огляду існуючої літератури та досліджень. У статті обговорюється потенціал застосування доповненої реальності для трансформації традиційних методик викладання. Вона пропонує додаткову інтеграцію доповненої реальності у викладання та вивчення мов, щоб краще відповідати унікальним навчальним уподобанням і цифровій свідомості курсантів IT-спеціальностей, для яких цифрове середовище стало «рідним» і тому вони можуть віддавати перевагу навчанню за допомогою практичних, експериментальних і технологічно опосередкованих підходів, а не пасивному прослуховуванню, перекладу чи читанню текстів, тощо. Традиційні методи можуть не відповідати їхнім стилям і вподобанням у навчанні. Доповнена реальність може імітувати реальні ситуації, з якими майбутні військові фахівці можуть зіткнутися у своїй професійній діяльності. Сюди входить спілкування з іноземними колегами, співпраця під час спільних навчань або переклад технічних інструкцій різними мовами. Тренуючи мовні навички у відповідних контекстах, курсанти можуть розвинути практичне володіння мовою, яке безпосередньо застосовується до їхніх військових обов'язків. У дослідженні також визнаються виклики і обмеження, пов'язані з впровадженням технології доповненої реальності в освітніх установах, і пропонується бачення потенційних стратегій подолання цих перешкод. У цій статті досліджується потенційний вплив доповненої реальності на мовну освіту з акцентом на використанні інноваційних технологій для покращення результатів навчання та задоволення зростаючих потреб студентів у цифрову епоху. У статті йдеться про те, що доповнена реальність може трансформувати освітній досвід і сприяти створенню більш динамічного та ефективного навчального середовища для курсантів у військових навчальних закладах. Використовуючи доповнену реальність як інструмент для інновацій і педагогічного вдосконалення, викладачі можуть дати студентам можливість взаємодіяти з мовою новими і змістовнимм засобами, що в кінцевому підсумку сприятиме більш захоплюючому і результативному навчанню.

Ключові слова: *доповнена реальність, навчання англійської мови, військові студенти, засоби, переваги, обмеження.*

Formulation of the problem. In recent times, technological innovations and information have had a significant impact on society. These advancements have enabled people to accomplish tasks that were previously unimaginable. The digital world has become so integral to their lives that communication devices, online services, and even remote learning have become indispensable. The rapid changes in the environment have been driven by a range of objective factors, including the development of smart technologies, improvements in transport, banking services, state institutions, and education. These changes have made it possible for individuals to navigate their surroundings with greater comfort and security. The era of innovation has arrived, where new technologies are replacing old and imperfect ones with faster, cheaper, more efficient, and user-friendly options. The younger generation has developed a unique worldview and adeptly navigates the web of exciting content produced by this new environment, absorbing it like a sponge and seeking ways to manage the new space to their advantage. The education sector is facing new challenges due to the digital age. Modern young people born in this era, commonly referred to as Zoomers, have integrated gadgets such as phones into their daily routines and cannot imagine their lives without them. So, if a modern textbook does not meet the requirements of students with different learning styles, it may fail to hold their attention and interest in the subject matter. It is worth considering that social media platforms like TikTok and Instagram are highly attractive to young people because the information there has been presented in a visually appealing and interactive manner, catering to different types of learners. Additionally, it is adaptive and can be reproduced through sound, making it more engaging. Therefore, it may be beneficial to explore how we can incorporate similar interactive features into educational materials to make them more engaging and effective. Modern students have the opportunity to listen to music, stories, and watch clips and films. They can also interact with others by recording their own video clips to showcase their skills. This allows them to be active participants rather than passive consumers, and they can even influence others. In the same way, the selection of learning content should take into account different learning styles and be designed to satisfy every learner (with auditory, visual or kinesthetic perception), thus motivating them to learn. Therefore, it may be beneficial for educational content developers to consider creating textbooks, courses, or learning platforms that align with the curriculum and present information in a consistent and visual manner. It is believed that visualising learning content may help students better perceive, understand, assimilate, and remember the material based on their individual learning characteristics. Moreover, students are allowed the opportunity to autonomously devise and build new content. Immersive technologies, such as Augmented Reality (AR), provide this possibility [1, 2].

We argue that it may be beneficial to examine Augmented Reality more closely. Due to its simplicity, mobility, and wide range of applications, AR allows learners to develop flexible academic techniques and flexible learning based on the principles of Gardner's Multiple Intelligences theory, which breaks down traditional systemic patterns of skill and knowledge development. According to Adam Hayes Augmented Reality is a technology that has the potential to enhance the real physical world by adding digital visual elements, sound, or other sensory stimuli [3]. D.W.F. van Krevelen and R. Poelman, state that AR is a mixed reality 'in which real objects are added to virtual ones, replace the surrounding environment by a virtual one' [4, p. 2]. AR system combines real and virtual objects in a real environment, aligns real and virtual objects with each other (overlaps), everything happens interactively in three dimensions in real time [5].

So, Augmented Reality (AR) refers to the integration of digital objects into the real world through devices such as computers, smartphones, tablets, and wearable technology. One area where AR has shown potential is in education, particularly in the creation of new educational materials. AR markers can be easily printed on book pages without incurring additional costs. It has been suggested that the addition of three-dimensional images of famous places or objects, such as the first computer, could enhance the reading experience of a book page. While special devices are currently being designed and first samples are being created, it is worth noting that a tablet or a smartphone with a relatively high screen resolution is sufficient to achieve this effect. By moving a textbook, the augmented virtual object can be viewed from different angles and scales. The development of Augmented Reality (AR) has the potential to transform the use of visual aids, as it may eliminate the need for bulky layouts. Instead, a small marker can be placed in front of the camera and a computer-generated image can be projected onto the screen. This image can be easily modified, rotated, and scaled. AR technology could allow students to virtually visit three-dimensional halls and exhibitions of world museums without leaving the classroom, which is beneficial for military students who cannot often leave their locations. Augmented Reality (AR) has potential for use in computer classrooms. Students can assemble virtual computers from blocks, view interactive 3D models of processors and hard drives, and conduct experiments in Augmented Reality in front of a monitor and webcam. The possibilities of this new technology in educational and computer games are vast. It is understandable that many young people may enjoy the idea of envisioning themselves in the attire of their favourite game characters too.

Publications analyses. The implementation of Augmented Reality in various fields has led to suggestions that it could also be applied to the educational process, specifically in foreign language learning. Some foreign authors have described attempts to do so. For instance, in his study, Godwin-Jones, R. (2016) proposes the possibility of using augmented reality games, such as Pokemon GO, in English language learning. Despite not being initially designed for language learning, the game's elements have been successfully incorporated by teachers in their instruction. It is possible that other mobile games with Augmented Reality could also serve this purpose. The game's widespread appeal presents an opportunity to combine education with entertainment, allowing students to choose their own path, which can be a motivating factor. The game's large player base facilitates team games in various locations, participation in forums, and a companion website is specially designed for players to connect, so that they can speak and practice English. Additionally, social interactions between players from different countries during the game may encourage language use and learning [6]. Other AR applications differ from Pokemon Go in their approaches and content. Marker-based AR applications can be used for teaching words and pronunciation, or generating flashcards, similar to traditional flashcards. These applications provide an illustration of a word or its association with a physical object it represents or is associated with. General feedback on applications suggests that they increase students' motivation, which is associated with the novelty of the experience and the ability to move around and interact with other players in the classroom. However, as noted by Santos et al. (2014), there have been modest achievements in learning English [7,8,9,10].

Svitlana M. Amelina et al. in their study on integrating digital resources into teaching professional communication in a foreign language, discuss the positive impact of digital resources on students, demonstrated through a virtual excursion with German language learners. The authors note that this model takes into account different learning styles and students' perception of the material. However, the authors also acknowledge that there are some limitations to the study, arguing that the utilization of AR technology is reliant on various factors, including internet connectivity, the devices used by educators and learners, and technical proficiency on both ends [11]. Several studies have shown the potential of implementing Augmented Reality to create research-based learning activities with gamification elements [12]. Irma Savitri Sadikin and Erista Martyani conducted a study to compare the effectiveness of using Augmented Reality flashcards and traditional paper flashcards in teaching foreign vocabulary to primary school students. The study found that Augmented Reality flashcards facilitated faster and more effective learning, while also reinforcing words in memory. Additionally, the use of Augmented Reality technology increased student engagement, motivation, attention, and enjoyment of the learning process. Using flashcards, students have the opportunity to interact with virtual objects as if they were physically present in front of them. By using a smartphone or tablet, they can easily access information related to the objects. By tapping on the object on the device's screen, they can make it move and rotate 360 degrees, allowing them to see it in a real environment. This method prioritizes student-centered learning, with the teacher serving as a facilitator [13]. The involvement of students in Augmented Reality projects and the positive results of such research are discussed by Bower M., Howe C., McCredie N., Robinson A., & Grover D. [14]. Student-generated AR has shown positive learning outcomes. Students can create markers by taking photos with their mobile devices and create add-ons, such as text annotations and video animations. The final products can be used in teaching grammar, vocabulary and more creative projects such as storytelling, incorporating the AR into the storyline. V. Kovalenko and co-authors examined the use of Augmented and Virtual reality in the context of blended learning in the general secondary education system and identified certain applications that can significantly increase the effectiveness of such an educational process [15]. As for the studies on Augmented Reality technology, considerable attention was paid to this issue by D. Yefimov, who analysed AR technology, formulated its purpose and functions [16], Y. Matvienko, who analysed the most common applications implemented with AR technology and advisable to use in the educational process [17], as well as V. Osadchyi et al, who concluded that the use of Augmented Reality technology improves the learning process of individual students, increases their motivation, and helps in organising teamwork and group cooperation [18]. **Topicality of the study.** The use of augmented reality (AR) in teaching English is currently a topic of much discussion. Technological advancements present new opportunities for educators to engage students and enhance the learning process. AR can be an effective tool to make language learning more interactive, immersive, and enjoyable. However, the focus should be on developing students' language proficiency rather than using the latest technologies. It is important to note that AR is not meant to replace traditional teaching methods but to complement them and it is up to the teacher to strike a balance between using AR and other instructional techniques.

Formulating the goals of the article. Our study aims to investigate and analyze the potential and prospects of Augmented Reality technology in improving the educational process, specifically in teaching English for specific purposes to IT students in a military educational institution. We will consider the aspects

of implementing Augmented Reality in the educational process, identify its advantages, means and determine its future prospects.

Presentation of the main material of the study. The study explores the potential and possibility of introducing Augmented Reality (AR) in English language teaching through various research methods, including analysis, synthesis, comparison, and generalisation.

The literature on the main aspects of virtual and augmented reality was reviewed to determine its role and forms of possible uses in the educational process of military institutions. The research material for this study consisted of works, articles, and scientific achievements from both foreign and domestic scientists working in a similar field. The synthesis method was applied to combine various information, analyze and identify advantages, and possible limitations in the process of introducing this technology into teaching English to future specialists in the field of special communications and information protection. The study utilized the method of generalization to draw overall conclusions, formulate key principles, and identify potential areas for further research. The main stages of the study were substantiation of the relevance of the research topic, study of the state of the object and subject of the research, choice of research methodology, discussion of the results, determination of the main aspects of the subject and object under study, namely the subject of ESP and the impact of innovative technologies, in particular Augmented Reality technology, formation of conclusions, which outlined the role of this technology in the educational process, and the main advantages and disadvantages as well as defined further research prospects.

Globalisation has had an impact on various aspects of our lives, including education. The changes brought about by globalisation require unconventional solutions and innovations. One such solution that has been widely used in other countries is Augmented Reality. Although it is still an emerging technology in Ukraine that requires further research, although, it has the potential to revolutionise teaching methods, including English. Augmented reality is a digital technology that overlays digital information onto the real world using devices such as phones, tablets, and laptops in real-time. It is a technology that combines the world of real objects around a person with the virtual world created on a computer, by adding virtual elements such as graphics, animation, sound, and touch response to the real environment. This technology has the potential to revolutionize the way we interact with the world around us. Creation technologies enable the merging of boundaries between the natural and artificial worlds.

The implementation of Augmented Reality technology in education presents several key advantages [16,19]:

– provides an opportunity to examine processes and objects in detail, compared to the usual static illustrations in textbooks, maps, etc;

– increases the level of interest and concentration of pupils and higher education students when learning new material and revising it;

– allows educators to conduct their own research and experiments;

– provides an opportunity to conduct complex and dangerous experiments and observations without harming the health of pupils or higher education students [20].

The pedagogical advantages of AR technology are accessibility (AR does not require special equipment for its implementation. This educational resource is available to the majority of the target audience and can be used with a regular tablet or smartphone), engagement (AR in education aims at a personalised approach that allows taking into account and implementing the individual abilities and needs of each student), interactivity (AR opens a wide multidimensional learning space for students, allowing them to interactively explore the world around them. Through visualisation and the ability to fully immerse themselves in the subject matter, students achieve better learning outcomes and learn more deeply) and collaboration (AR's rich interactive capabilities encourage students to work together and develop teamwork skills).

AR technologies allow students to control augmented reality objects, move them, rotate them, change their scale and view them from different angles, giving a great impetus to the development of spatial thinking, allowing them to perceive the subject matter more fully and deeply, thus increasing the level of knowledge. The visualised virtual information is synchronised with real space and time, creating a complete immersion in augmented reality and thus enhancing the perception of the learning material. It becomes possible to see architectural monuments and museum exhibits in the smallest details, to see and study geographical objects, their relief, structural features, etc., to perform physical or chemical experiments that are very problematic in real life, as well as to view geometric spatial objects from different angles when solving stereometry problems, etc.

The use of augmented reality in the educational system will help to unify general educational programmes, teachers' and students' efforts through:

– gaining experience in project activities;

– collective implementation of information projects;

– creation, editing, design, storage, transmission of information objects of various types using modern software tools;

– information activities in various areas in demand on the labour market;

– development of algorithmic thinking, formalisation abilities, elements of systemic thinking;

– mastering the ability to use information and communication tools and to adapt them to the user's needs [16, p.223]. It should also be stressed that Augmented Reality technology develops spatial thinking and contributes to a more harmonious development of the individual.

Faria and Miranda conducted a study on scientific sources related to AR and concluded that students who were taught using AR achieved better academic results compared to those who used traditional methods. Furthermore, AR has been found to enhance video-spatial skills by improving the perception of 3D processes or concepts. In addition, it has been observed that AR can improve students' problem-solving and self-control skills. The use of anatomical models has been found to be helpful in aiding students to comprehend internal structures and complex subject matter. This approach has also been shown to foster the development of higher-level cognitive skills, such as analysis, evaluation, and creation, as outlined in Bloom's Taxonomy. Furthermore, it has been suggested that this approach can enhance memory retention and lead to more sophisticated and comprehensive presentations, ultimately supporting meaningful learning. It has been demonstrated that the incorporation of AR into educational process has a favourable effect on a range of factors, such as attention, engagement, interest, motivation, knowledge, satisfaction, perception, learning achievement, retention, enjoyment, and autonomy [21].

The analysis of the sources has shown that there is a limited availability of AR applications and content that are appropriate for foreign language teaching. Cemil Gökhan Karacan and Kemal Akoğlu have identified three categories of AR applications based on their intended use, location of use, and ease of use: image-based, creation-based, and markerless AR. It is worth noting that image-based applications require sets of cards that are available for purchase in store, and that each set of cards requires a separate application to be downloaded. However, if the cards are issued by the same manufacturer, the same application can work with several sets of cards. These cards can represent various vocabulary items such as objects, animals, and transportation, and can be used in English lessons according to the tasks developed by the teacher. It is also worth mentioning that markerless AR applications are readily available on the market. The company provides pre-tailored lesson plans, which may not always meet the specific needs of teachers and cannot be customized. However, creation-based AR applications offer users the ability to create their own personalized experiences, unlike the other two types. Users can combine pictures with videos, music, 3D objects, or 360 videos based on their requirements. [22]. Papanastasiou et al. argue that, AR has been found to positively impact 21st century skills. Specifically, it promotes flexible, open, and collaborative learning, provides realistic and interactive role-playing simulations, allows for a greater variety of courses to be delivered, and socially connects people and organizations. Furthermore, AR has been shown to develop users' ability to perceive and modify reality. Furthermore, students can improve their learning outcomes by collaborating with each other, which fosters higher-order thinking skills and encourages learning by doing. The use of virtual reality (VR) has been shown to significantly enhance the memorisation of lists of similarly categorised items. VR has been proven effective in almost all areas of school and higher education, and virtual worlds can also help develop students' social skills through the use of avatars. [23]. The choice of AR as a tool for teaching ELT is determined by its ability to integrate context-specific multimedia components and proven benefits for the purpose of teaching ELT and developing these 21st century skills. In this case, teachers can use applications where they can freely create their own contextualised AR for their own needs. Chin emphasises the need to incorporate DR into distance learning as it provides kinesthetic and 3D perspectives. AR can be considered advantageous for students learning anatomy in higher education due to its benefits compared to traditional systems. These benefits include three-dimensional visualizations, kinesthetic learning, an interactive environment, increased student interest, improved knowledge retention, and faster and more effective learning. Additionally, the use of AR can aid in memorization. Therefore, it can be concluded that the advantages of AR make it a valuable tool for educators to consider [24].

L. Tarangul and S. Romaniuk [25] assert that students studying IT possess a digital consciousness and algorithmic mindset, resulting in a unique approach to information processing. Their focus is on acquiring real-time information. They develop non-verbal intelligence, including advanced spatial representations, formal and logical thinking, and a combination of synthetic and analytical thinking. Students who major in computer science and computing excel in parallel processing and multitasking. With access to numerous new sources of information, they are equipped with the means to obtain it. The IT professionals of the future prefer graphics and multimedia over text and paper-based media. They tend to watch video lessons instead of reading a chapter from a textbook. Future IT professionals rely on a range of digital technologies, especially as they will soon be developing complex software systems themselves. Specialised subject teachers are actively seeking new tools to present information in an engaging way that stimulates students' cognitive interest and motivates them to learn with pleasure. Active and interactive teaching methods are commonly employed in the classroom. These methods supplement textual information with graphs, logic diagrams, tables, formulas, and modern means

of visual and auditory demonstration, including animation elements. This approach enhances the visual aspect of the learning material. Our observations indicate that engaging future IT professionals remains a challenge. Two-dimensional diagrams and tables alone may not facilitate the understanding of complex technical terms and abstract concepts, hindering the development of cognitive interest. Augmented reality technology is a suitable tool for shaping and developing the cognitive interest of future IT specialists. Its use allows for the creation of a new system of interaction between students and information. Augmented reality supports the understanding of complex phenomena by providing unique visual and interactive experiences that combine real and virtual information, helping to communicate abstract problems to learners.

Yuen, Yaoyuneyong, and Johnson explored five important applications of Augmented Reality (AR) in the learning process that can be used in English teaching: AR books, AR gaming, discovery-based learning, object modelling, and skills training [26]. AR books can effectively bridge the gap between the digital and physical worlds. They provide 3D presentations and interactive experiences that are particularly appealing to digital native learners who may not be interested in traditional books. Augmented books are similar to printed books, but with virtual images on their pages. They have great academic prospects due to their ideal graphics for visual tracking [27]. We are aware that the task of creating such books for learning English by IT specialists is quite expensive and time-consuming, but The MagicBook platform and AR interface system can be utilized to create 3D content for any standard textbook, bringing it to life with animated and interactive models based on existing images or texts within the book. This solution is both cost-effective and time-efficient, making it an ideal choice for producing English learning materials for IT professionals. The textbook serves as a basic interface that allows students to alter their perspective by moving their heads or the book itself, because computer-generated 3D content is integrated with the book page, enhancing the development of storytelling skills. Studies have shown that students who read texts with AR can recall and recount more details than those who work with regular text. Moreover, AR books promote reading proficiency, facilitate immersive learning, and foster collaboration skills. These books are particularly appealing to students with diverse learning styles [28]. Digital games enable educators to incorporate the latest highly visual and interactive teaching methods. They provide an easy way for students to comprehend complex lesson concepts. Digital games for foreign language learning can be classified into two types: marker-based, which are flat board games or cards that can be transformed into a 3D space using mobile devices or webcams. One type of game that allows players to create virtual

objects or creatures and attach them to specific locations in the real world can be distracting for students. It is important for teachers to maintain control of the group and ensure that students stay on task and follow the lesson plan. Educational games have not yet reached their full potential. They generate interest and can hold the attention of students while teaching various skills. Discovery-based learning is an opportunity to motivate students and achieve better results in learning a foreign language. Therefore, games like these should be introduced confidently and assertively as a valuable addition to traditional methods, whether as a project or as self-study assignments. Modern smartphones are not only equipped with powerful processors but also with additional functions such as a navigator, compass, camera, etc. Educational applications have been created based on these functions, providing a new learning experience both externally and internally. Students can go on a virtual tour or search for treasures, while the teacher assigns students to carry out research projects and create corresponding content. This content is related to a specific territory, event, or concept encountered and learnt during a virtual journey. Users with the AR interface can supplement the physical map of the environment and obtain additional information. CityViewAR (www.hitlabnz.org/cityviewar) is one example of innovative experimental learning which we have encountered. Students can use this mobile app to walk around the city of Christchurch and see the buildings as they were before the 2011 earthquake destroyed them. The phone's GPS and compass sensors set the user's location and viewpoint so that the app can place a virtually reconstructed building on the ruins of a real building. The user can tap on the buildings on the screen and read historical information on the site along with geo-located panoramic photos taken immediately after the earthquake. Many mobile AR apps provide a similarly realistic experience in a physical location that is directly related to the lesson topic. With indoor AR apps, users mostly interact with augmented books as readers. Computer vision software running on mobile phones tracks printed images and overlays virtual content on top of them. Regardless of the location of use (outdoors or indoors), users of mobile AR apps are involved in a fun and engaging experience that is relevant to the lesson topics. Developers of mobile apps have already created a number of interesting apps that can be used in language teaching as well to learn specific topics. [29]. AR can be used to model objects, allowing students to view them from different angles and in various environments. Creating an AR scene can provide a valuable hands-on learning experience. Students are encouraged to consider how to use technology and what language to use to convey complex concepts. For instance, students were given the task of creating an AR scene of a computer system. Initially, it is

important for students to acquire knowledge about the fundamental components of a computer and their functionality. Subsequently, they require the necessary tools to generate content and construct the scene. To fulfil these requirements, basic authoring tools are being developed, which can be utilised by students without any programming expertise to create AR scenes. Additionally, AR has the potential to be used in skills training, making it an effective educational tool. At the current stage of technology development, it could be argued that AR has the potential to provide contextual learning experiences and unpredictable exploration, while promoting the connected nature of information in the real world. Additionally, AR can complement product presentations by creating an additional interactive digital layer of information on 2D models and physical 3D mock-ups using simple authoring tools. By incorporating an additional layer of information into their presentation boards and mock-ups, students can effectively showcase project details that may not have been possible with more conventional presentation methods.

Conclusion. In conclusion, we argue that it is worth considering the integration of Augmented Reality into English Language Teaching for Information Technology students within military educational institutions as it presents a transformative opportunity to enhance the educational process. This article has highlighted the pedagogical advantages of AR, such as accessibility, engagement, interactivity, and collaboration, which make it a promising tool for language education. The study has examined different applications of AR in ELT, it highlights the potential of AR to transform conventional teaching methods and meets the distinct learning preferences of IT students.

However, it is important to acknowledge that the use of AR technology in educational settings presents certain challenges and limitations, such as technical constraints, resource requirements, and the need for teacher and learners' training or it may be costly enterprise. Nevertheless, by careful addressing these obstacles and exploring strategies for effective integration, educators can fully utilize AR's potential to create dynamic and interactive learning environments that promote deeper engagement and facilitate meaningful language acquisition.

Further research and experimentation may be necessary to gain a complete understanding of the impact of AR on language education and to explore new possibilities for its application. It is important for educators to remain proactive in exploring innovative ways to use AR and other emerging technologies to meet the evolving needs of learners in the digital age.

It is suggested that the integration of Augmented Reality into English language teaching for IT students in military educational institutions has the potential to enhance language education and prepare students for success in an increasingly digital world. By embracing AR as a tool for innovation and pedagogical enhancement, educators can empower learners to engage with language in new and meaningful ways, ultimately fostering a more dynamic, immersive, and effective learning experience.

Significant progress has been made in understanding the potential of Augmented Reality in English Language Teaching for Information Technology students within military educational institutions. However, it is recommended that future research should explore several avenues. Firstly, longitudinal studies are needed to assess the long-term impact of AR integration on language learning outcomes, retention, and proficiency levels. Moreover, it is recommended that comparative studies are carried out to assess the efficacy of AR-enhanced instruction in contrast to conventional teaching methodologies across diverse contexts and student demographics.

Additionally, more research could be conducted to explore the creation and improvement of AR applications and content that are customised to the language learning requirements of IT students, while considering pertinent factors.

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