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Prethodno priopćenje
15. V. 2024.

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ARTIFICIAL INTELLIGENCE TOOLS IN A FOREIGN LANGUAGE LEARNING

ABSTRACT

We live in the 21st century. Nothing is the same as it used to be ten years ago, not to mention 50 or more years ago. Everything has changed. We live in a world of fast communication where the biggest problem is time, i.e., the lack of time. We want everything, and we want it now. We live a multi-tasking life, and 24 hours is not enough to do everything we need. Some kind of assistance is more necessary than ever before; consequently, humans have invented machines to make their lives easier. Today, we have devices and gadgets we could only dream about or see in science fiction movies 50 and more years ago, such as iPhones, robots, drones, and different tools to help us learn something, buy things online, and similar. Artificial intelligence (AI) is now present almost everywhere. However, in this paper, the authors are interested in using artificial intelligence tools in English language learning. The central part of this paper was to investigate if English language students at the Faculty of Humanities and Social Science of the University of Mostar use artificial intelligence (AI) tools in their language learning and, if so, which ones would be the most dominant. For that purpose, a questionnaire containing 11 questions was created using Google Forms, and students were asked to fill it out. The total number of students who participated was 69. Two hypotheses were set – the first one indicates that EL undergraduate and graduate single-major and double-major students are familiar with the term *artificial intelligence*, and the second indicates that *Google Translate* is the most commonly used AI tool. Both hypotheses were proven. Even though only 69 students participated, it can be said that the results are representative because they give a good insight into the actual, current situation regarding English language students' s use and implementation of AI tools in their English language learning and can be taken as a reasonable basis for some future, more thorough research.

Keywords: questionnaire; Google forms; English language students; English language learning; artificial intelligence (AI); artificial intelligence tools.

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INTRODUCTION

We live in the 21st century, which means that today's way of life has completely changed compared to 20 or more years ago. Today, we witness many drastic changes and improvements in every aspect of life, from our own household to our workplace, etc.

Life has become so fast that we simply feel the lack of time for whatever we want to do. We have become multitaskers, i.e., we want to do as many things as possible at the same time, which results in our frustration because we are not able to do that. Communication has also become fast. All those changes in our way of life required some "assistance" without which we could not function normally in the 21st century.

Here, we do not only refer to huge improvements that happened at the end of the 20th and beginning of the 21st century, but changes started a long time ago and have improved over time. Simple examples of some kinds of "assistance" were all those household devices, which came as a big help to all working women. Later on, as the way of life became more demanding and complicated, as well as communication, we witnessed the appearance of computers, the Internet, iPhones, tablets, different kinds of robots performing different tasks, and similar.

Every kind of a new device could be regarded as a certain artificial intelligence tool. However, real Artificial Intelligence tools are those used in this modern world and which enable us to meet all the tasks and requirements of the modern life. Namely, this paper deals with artificial intelligence tools used in language learning, or more precisely, in English language learning (ELL). However, the paper is divided into two main parts – the theoretical, in which the authors elaborate on what artificial intelligence is, what it refers to, and where it can be used.; and the second part, which presents the analysis, i.e., the results of the research conducted among the EL students at the University of Mostar regarding their attitudes towards the use of AI tools in their everyday language learning.

The goal of the research was to find out if English language students at the University of Mostar are familiar with the term *artificial intelligence* or *artificial intelligence tools* and, if they are, which of those tools they mostly use or consider useful in their language learning or performing any kinds of tasks.

WHAT IS "ARTIFICIAL INTELLIGENCE (AI)"?

Artificial intelligence (AI) developed in the mid-twentieth century when pioneers in mathematics and computer science began investigating the notion of computers that might replicate human intellect (Boden, 2016). The phrase *artificial intelligence* was created in 1956 during the Dartmouth Conference, which brought together luminaries such as John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon. The goal of artificial intelligence (AI) as a science is to make machines do things that would require intelligence if done by humans (Boden, 1977). Initial attempts to train computers to interpret and produce human language marked AI's debut in natural language processing (NLP). Early efforts were restricted by computer power and data availability, resulting in very rudimentary rule-based systems. In the late 1950s, the Logic Theorist, created by Allen Newell and Herbert A. Simon, was a pioneering system in NLP. It may use symbolic logic to establish mathematical theorems, an early step toward computationally interpreting and manipulating human language. Joseph Weizenbaum invented ELIZA, software that could participate in text-based discussions, around the same time. While ELIZA's replies were frequently simplistic and contrived, they introduced the notion of human-computer interaction via natural language, piqued interest in AI's potential for writing and communication (Barr, 1980).

The 1970s and 1980s witnessed the development of early language models and machine translation systems. Researchers explored rule-based approaches and statistical methods to improve the quality of automated translations and text generation. Examples include the Rule-Based

Machine Translation (RBMT) systems and early attempts at grammar checkers. AI made tremendous advances in the late 1980s and 1990s, notably in the form of neural networks. After a hopeful start, AI research hit a rough patch with less money and fewer people interested, which is called the “AI winter.” During this period, it looked like AI’s potential influence on writing and language processing was on pause. The twenty-first century saw a resurgence in AI research, fueled by improved processing power, access to massive datasets, and machine learning advancements. Modern language models such as the GPT (Generative Pre-Trained Transformer) series, BERT (Bidirectional Encoder Representations from Transformers), and others arose as a result of this renaissance. These deep learning-powered models have changed NLP and renewed AI’s connection with writing (Al-Ghamdi, 2021).

AI tools for writing, making content, and chatbots are everywhere now, used in journalism, marketing, customer service, and creative writing. Mixing AI with writing is not just a sci-fi idea; it is a real part of how we talk and share information today.

Historical overview of AI and its influence

The struggle to teach intelligent machines to interpret and produce human language has been central to developing artificial intelligence (AI) for a long time. Significant improvements in natural language processing (NLP) and writing-related tasks may be used to chart the path from early rule-based systems to modern deep learning models in AI.

The formal start of AI research came with the introduction the phrase *artificial intelligence* in the 1950s. Researchers like Alan Turing and Claude Shannon introduced the ideas of machine learning and language processing, which created the theoretical foundation for AI. Deep learning, attention mechanisms, and enormous training datasets are used by modern AI models like BERT (Bidirectional Encoder Representations

from Transformers), ELMo (Embeddings from Language Models), and massive-scale language models like GPT-3 and BERT to achieve outstanding results in language understanding and generation. These advancements show how far AI has come, from the early rule-based systems that could only analyze a small amount of text to the modern era of deep learning models that can comprehend and produce human language with ever-increasing sophistication. These advancements have transformed writing tools, content generation, and language translation, reshaping written communication and creating new possibilities for collaboration between humans and AI in the future of writing.

Examples of AI

Artificial Intelligence can be found in various applications, with e-commerce as a prime example. It plays a crucial role in tasks such as personalized shopping and fraud prevention. AI-powered recommendation engines enable companies to engage more effectively with their customers by considering their browsing history, preferences, and interests. It strengthens the relationship between businesses and their clients and boosts customer loyalty.

Beyond customer support, AI-driven chatbots and virtual assistants play a pivotal role in guiding customers through their purchase decisions. Chatbots excel in handling routine queries and frequently asked questions. By leveraging predefined responses and learning from interactions, these AI agents efficiently address common customer concerns (James, S., 2023).

Big companies like Amazon decrease the number of actual human workers daily and try to fill the spots with AI. An example of that is their plan to completely transform customer service into chatbots that will solve customer problems.

The internet, while a valuable resource, is frequently an unsafe space. People often share their personal information without being aware of the risks. AI, however, often comes to the res-

cue. Fake reviews and credit card theft are two of the biggest problems that e-commerce businesses face. Artificial Intelligence can significantly reduce the likelihood of credit card theft by taking usage trends into account. Moreover, AI has the ability to effectively identify and handle fake reviews, thereby addressing these challenges head-on.

Rise of AI

The previous two decades marked the revolutionary period of interconnection and communication brought about by the rise of the online world. Social media platforms are the center of this rise, as with the advent of artificial intelligence (AI), social media platforms have evolved to provide personalized and engaging user experiences (Chatfield, 2023). It is a universal force that has radically changed communication, information distribution, and social connection, redefining how people interact. Social media platforms have become essential to modern life, from the widely used Facebook and Twitter to the aesthetically pleasing Instagram and entertaining TikTok (Darbynian, 2020).

With the amazingly fast growth rate, it was just a matter of time before AI became a part of social media.

AI in education

Artificial Intelligence has also quietly entered the classroom. (Luckin, R. et al., 2016). Artificial Intelligence in education includes everything from AI-driven, step-by-step personalized instructional and dialogue systems through AI-supported exploratory learning, the analysis of student writing, intelligent agents in game-based environments, and student-support chatbots to AI-facilitated student/tutor matching that puts students firmly in control of their own learning (Holmes, W. et al., 2019). Even in the educational sector, faculty productivity has increased due to artificial Intelligence's gradual adoption, which has allowed them to focus more on students and

methods to enhance the teaching experience. Artificial Intelligence may be used to create digital versions of textbook aids, conferences, and video courses. For pupils in different grades, various interfaces, such as animations and customized learning materials, might be used (Gültekin & Babayit, 2023).

Artificial Intelligence generates and provides audio and video summaries and comprehensive lesson plans, which create a rich learning environment.

Numerous AI-powered applications, platforms, and assistants have been incorporated into the teaching and learning of languages, such as Duolingo, Coursera, Babbel, ChatGPT, Rosetta Stone, Busuu, Linguist, Grammarly, or Google Translate. They offer customized learning content and immediate feedback to students (Luckin et al., 2016) and help them learn at their convenience and more independently and efficiently. By analyzing students' performance data, AI can offer personalized learning programs and language exercises adapted to different students' needs, proficiency levels, and learning styles and provide immediate personalized feedback on students' vocabulary, grammar, and pronunciation. Not only does it make language learning more interactive, but it also helps students to achieve better results. This also contributes to increased learner autonomy in developing their English language proficiency (Rukiati et al., 2023)

Some of those AI applications and platforms are more popular than others, and there is a difference between whether the user is a beginner or wants to improve his language proficiency.

Duolingo is a free language-learning application available online. It relies heavily on gamification as a language-learning program, which might be one of the reasons why it is one of the most popular (Muin et al., 2021). The application is free to use and primarily centers on users responding to vocabulary questions presented in a game-like format. These questions include various activities such as translation, sentence construction with provided words, speaking, listening, and

matching with images. Notably, it does not incorporate traditional grammar lessons.

ELSA Speak is a mobile application designed to help users improve their English pronunciation and speaking skills. It uses advanced speech recognition technology to analyze the user's voice and provide instant feedback on their pronunciation. By focusing on real-world scenarios and conversational practice, *ELSA* aims to enhance users' confidence and fluency in speaking English.

ChatGPT, an evolution based on the GPT (Generative Pre-Trained Transformer) architecture, arrived on the scene in 2018 when OpenAI introduced the original GPT model. It was a paradigm shift that featured the capability to generate text that mimicked human conversation (Williams, 2024). Machine learning algorithms are used to process and analyze data and provide responses to the user's questions. This language processing program can understand human language in written or spoken form while excluding everything unnecessary and therefore can provide an easily understandable answer to the user's questions (Bowman, 2022).

Google Translate is a free service offered by Google that allows users to quickly translate sentences, documents, and even entire websites into various languages. With support for 109 languages, it has significantly improved since its launch. One of the more significant improvements happened in 2016 when it began using a sophisticated machine learning technique known as neural network learning. This method allows the tool to analyze many texts simultaneously, ensuring that it captures the complete context of the translated material. As a result, the accuracy and overall quality of translations have greatly improved, making it a valuable resource for anyone needing to communicate across language barriers. The future of *Google Translate* holds even more promise with advances in machine learning and artificial intelligence, which will continue improving the quality of translations and user experience (James, G., 2023).

Hidden AI

For many, the concept of AI is relatively new. AI has been present and has been in use for an extended period. Even though many people will reflect and look at AI only as today's very popular Chat GPT, AI is much more than that. Some of the "hidden" AI tools most people have used are many forms of translators, auto-correct tools, photo enhancement tools, organization tools, editing and formatting tools, and many others. AI is connected to everyday routines, jobs, and some of the most straightforward tasks without humans being aware. Stigma and fear around AI is often high, but it could easily be lowered by educating around how AI operates and how often it makes things easier (Darbynian, 2020).

Technical and social controversies

Concerns about safety, dependability, and existential danger are among the technical debates surrounding artificial intelligence (AI), in addition to ethical and societal ones. Experts warn of the possibility of catastrophic results and unexpected effects in developing AI-driven autonomous weapons systems, which presents severe ethical and humanitarian issues. Furthermore, concerns about AI's long-term effects on mankind are raised by the search for artificial general intelligence (AGI), particularly the potential for AI to outsmart humans and act against their interests or morals. These technological disputes highlight the need for strong governance structures and moral standards to guarantee the ethical and safe advancement of AI systems. The effects of AI on society have also given rise to debates about social inequity, employment displacement, and privacy. Concerns concerning widespread surveillance, the degradation of private rights, and the enlargement of power disparities between people and institutions are raised by the spread of AI-driven surveillance technology. Furthermore, AI's ability to automate jobs has raised worries about people losing their jobs and increasing economic inequality, especially for those in simple or low-skill work. To tackle these social issues, it's important to think abo-

ut laws and programs that protect privacy, help workers who lose their jobs and promote fair economic growth.

AI also raises important talks about ethics, society, and technology. To handle these topics, policymakers, researchers, and others should work together to create rules that make sure AI is used and developed in a responsible way. Society can overcome the obstacles presented by artificial intelligence and realize its transformational potential for the good of mankind by cooperating and having educated conversations (Božić, 2023). Having elaborated on the most important facts about *artificial intelligence*, its positive and negative sides, implications, and potential dangers of its use, the second and central part of the paper analyzes the use of artificial intelligence tools by EL students at the University of Mostar.

ANALYSIS

The research was conducted from 22nd September 2023 to 6th October 2023.

The goal of the research was to investigate how many (if any) the EL students of the Faculty of Humanities and Social Sciences at the University of Mostar are familiar with the term *artificial intelligence (AI)* and which AI tools they find most helpful in their language studying.

Methodology

For the research, a questionnaire was created using Google Forms. Students were given 11 questions to answer.

Two hypotheses were set:

H1: Single-major and double-major students of both study cycles are familiar with the term Artificial Intelligence (AI),

H2: Google Translate is the most commonly used AI tool by all EL students.

The research started with general questions such as: age, gender, study year, study group, followed by more specific ones related to the topic, such as if they are familiar with the term *artificial intelligence* and if they are, which artificial intelligence tools they use or find the most helpful, etc. Some of the questions were marked with an asterisk, which means that those questions were mandatory.

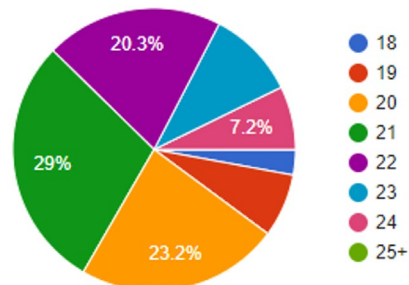
Although most questions were answered with short yes/no answers, some of the more specific ones required more descriptive and precise answers. There were 69 students participating in the research.

Results

Below can be seen graphs and results for all 11 questions included in the questionnaire:

1. How old are you?

69 responses

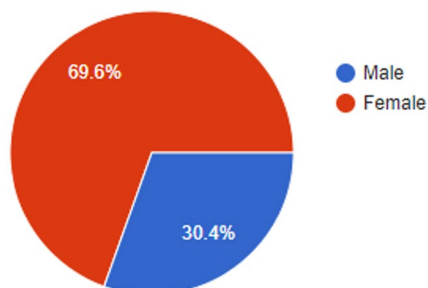


Graph 1: EL students' age

The **Graph 1** shows the age ratio of EL students who replied to the first question. As it can be seen from the graph, the first question related to age and all 69 students replied to this question. The majority of students (29%) are 21-year-olds, followed by 20-year-olds (23.2%), 22-year-olds (20.3%), 24-year-olds (24%), etc.

2. Are you a male or a female?

69 responses

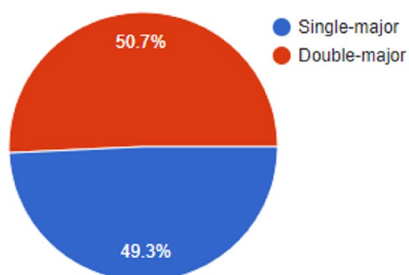


Graph 2: Students' gender ratio

The **Graph 2** presents the gender ratio of EL students who replied to the second question. Once again, the graph shows that all 69 students replied to this question. Regarding the gender ratio, it can be seen that there were more female respondents (69.6%) in comparison to male respondents (30.4%), which could be understood in such a way that girls were more willing to participate in the research.

3. What is your study group - single-major or double-major

69 responses

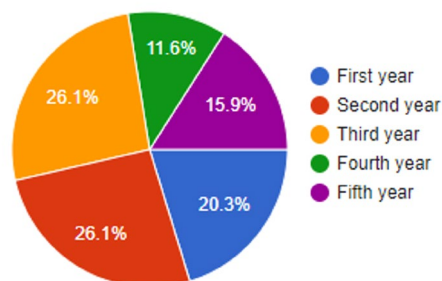


Graph 3: Students' study group ratio (single-majors vs. double-majors)

The **Graph 3** shows the study group ratio of EL students who participated in the research. Again, all 69 respondents replied to this question. According to the **Graph 3**, there were more double-major students (50.7%) in comparison to single-major students (49.3%), which means that double-major students were more willing to participate in the research.

4. What is your study year?

69 responses

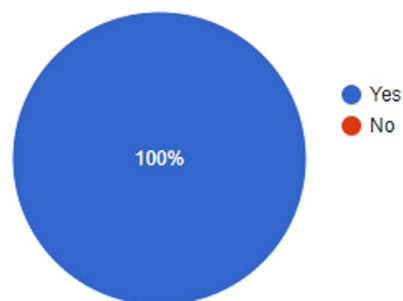


Graph 4: EL students' study year (undergraduates vs. graduates)

The **Graph 4** shows the ratio of EL students' study years, i.e. the ratio between undergraduate students and graduate students. Once again all 69 students replied to this question. Considering this question, it can be seen that undergraduate students were more willing to participate in the research due to the fact that there was an equal percentage of third-year and second-year undergraduate students (26.1%), followed by first-year undergraduate students (20.3%). Finally, there was 15.9% of fifth-year students and 11.6% of fourth-year students.

5. Are you familiar with the term "artificial intelligence (AI)"?

69 responses

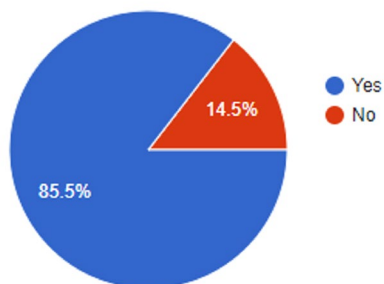


Graph 5: The percentage of students' familiarity with the term "artificial intelligence (AI)"

The **Graph 5** shows that all 69 respondents replied to this question and that all of them are 100% familiar with the term "artificial intelligence (AI)".

6. Do you use any of AI tools such as:
Google Translate, Text to speech (TTS), English
Able, Orai, Elsa, Chatbot, Duolingo, Neo?

69 responses



Graph 6: Some AI tools used by EL students

The **Graph 6** shows that all 69 respondents replied to the 6th question, in which they were asked if they used any of AI tools that are commonly used in ELL, such as: Google Translate, Text to Speech (TTS), English Able, Orai, Elsa, Chatbot, Duolingo, Neo. According to the **Graph 6** results, the majority of them (85.5%) do use some of these AI tools, whereas a small number (14.5%) do not use any of the mentioned AI tools.

7. If you answered “Yes” in question no. 6, please state which AI tools you use.

59 responses

Only Google Translate:	Both Google Translate, Duolingo:	Other:
20 (11.8%)	15 (8.85%)	Google Translate, Duolingo, TTS: 4 (2.36%) Google Translate, Chatbot: 3 (1.77%) Google Translate, Chat GPT: 3 (1.77%) Google Translate, Chatbot, Duolingo: 2 (1.18%) Google Translate, TTS: 2 (1.18%) Google Translate, Thesaurus, Chat GPT, Grammarly: 2 (1.18%) Google Translate, Duolingo, Chat GPT, Hemingway, Quilbot: 2 (1.18%) Google Translate, GPT, Duolingo: 2 (1.18%) Chat GPT:1 (0.59%) Chat GPT, Duolingo: 1 (0.59%) Duolingo: 1 (0.59%) TTS: 1 (1.18%)

Table 1: The AI tools used by EL students

As it can be seen from the **Table 1** above, 59 respondents replied to the question **number 7**, in which they were asked to mention which AI tools they use in their ELL, i.e. in studying and completing their study tasks. The majority, 20 (11.8%) students out of 59 who replied to this question said they used Google Translate, followed by 15 students (8.85%), who said they used both Google Translate and Duolingo. Most of the remaining respondents replied that they also used Google translate. Additionally, there were those who mentioned using some other AI tools in addition to those two the most popular ones (Google Translate and Duolingo), such as: Google Translate, Duolingo, TTS: 4 (2.36%); Google Translate, Chatbot: 3 (1.77%); Google Translate, Chat GPT: 3 (1.77%); Google Translate, Chatbot, Duolingo: 2 (1.18%); Google Translate, TTS: 2 (1.18%); Google Translate, Thesaurus, Chat GPT, Grammarly: 2 (1.18%); Google Translate, Duolingo, Chat GPT, Hemingway, Quilbot: 2 (1.18%); Google Translate, GPT, Duolingo: 2 (1.18%); Chat GPT:1 (0.59%); Chat GPT, Duolingo: 1 (0.59%); Duolingo: 1 (0.59%); TTS: 1(1.18%).

8. If you have already used any of AI tools, which one (s) do you find especially helpful for your studying?

50 responses

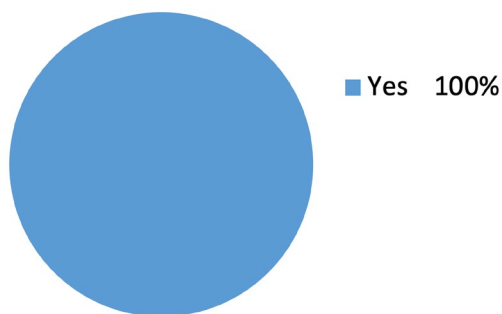
Only Google Translate:	Other:	None: 2 (1%)
26 (13%)	Chat GPT:7 (3.5%) TTS: 4 (2%) Chatbot: 4 (2%) Duolingo: 1 (0.5%) Google Translate&Chatbot: 3 (1.5%) Google Translate& Duolingo: 1 (0.5%) Thesaurus&Chat GPT: 1 (0.5%) Google Translate& Duolingo&Hemingway: 1 (0.5%)	

Table 2: The most helpful AI tools used by EL students

As it can be seen from the **Table 2** above, 50 respondents replied to the question **number 8**, in which they were asked to mention which AI tools they especially found helpful in their studying. Once again, the majority of the respondents (26 or 13%) said they considered Google Translate as the most helpful AI tool in their studying. The rest of the respondents mentioned some other AI tools as being the most helpful, out of which 7 respondents (3.5%) mentioned only Chat GPT; 4 respondents (2%) mentioned only TTS; 4 respondents (2%) mentioned only Chatbot; 3 respondents (1%) mentioned Google Translate and Chatbot; 1 respondent (1.5%) mentioned Google Translate and Duolingo; 1 respondent (0.5%) mentioned Google Translate, Duolingo and Hemingway; 1 (0.5%) respondent mentioned only Duolingo; 1 respondent (0.5%) mentioned Thesaurus & Chat GPT. However, it is interesting to mention that only 2 respondents (1%) said they did not consider any AI tools as being helpful in their studying.

9. Do you think that AI tools will be even more commonly used among generations-to-come?
 All respondents (69 or 100%) are convinced that AI tools will be more commonly used among generations-to-come.

Will AI tools be even more commonly used among generations-to-come?



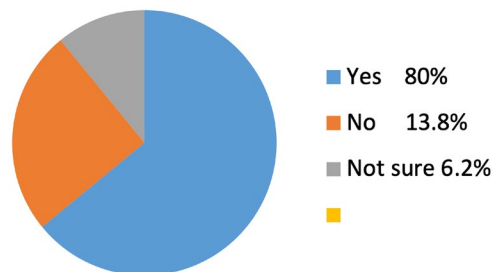
Graph 7: Students' opinion on whether the AI tools will be more commonly used among generations-to-come

According to the **Graph 7**, all students who participated in the research are 100 percent sure that AI tools will be more commonly used among generations-to-come.

10. Do you think that AI tools are used more in some aspects of life (some jobs)? If yes, in which?
 69 responses

All respondents replied to the question **number 10**. However, 55 of them (80%) are convinced that AI tools will be used more in some aspects of life (some jobs). Furthermore, 5 respondents (13.8%) do not think so, whereas 9 respondents (6.2%) are not sure.

Do you think that AI tools are more used in some aspects of life?

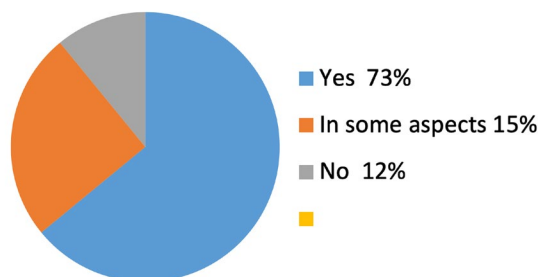


Graph 8: Students' opinion on whether AI tools are more used in some professions

11. Do you think that AI intelligence tools are very helpful in education, especially in language learning?
 69 responses

Once again all respondents (69) replied to the question **number 11**. Nevertheless, 50 respondents (80%) replied positively considering AI tools very helpful in education, especially in LL. However, some of them (6.2%) thought that AI tools could be helpful, but not in all aspects of life and only if used properly. Finally, 9 respondents (13.8%) did not think that AI tools could be helpful at all.

Do you think that AI tools are very helpful in education, especially in LL?



Graph 9: Students' opinion on whether they consider that AI tools are very helpful in education, especially in language learning

According to the **Graph 9**, 73% of students think that AI tools are very helpful in education, especially in language learning. Additionally, 15% of them consider AI tools helpful in some aspects, whereas 12% of the students consider AI tools completely useless.

CONCLUSION

At the very beginning of the paper some reasons for creating and using AI tools were mentioned, followed by some definitions and explanations of what AI actually is and what it is used for. However, the main goal of this paper was to investigate the situation among the undergraduate and graduate single-major and double-major EL students at the Faculty of Humanities and Social Sciences of the University of Mostar. Namely, the authors of this paper tried to find out whether the EL students of the University of Mostar use AI tools in they studying, i.e. doing any kinds of tasks, as well as self-improvement in their language skills (both grammar and vocabulary) and if yes, which AI tools they use and find especially helpful.

The research was conducted from 22 September till 6 October 2023 in a form of a questionnaire which was created using Google forms and sent to undergraduate and graduate single-major and double-major students through student representatives. Namely, 69 respondents replied to 11

questions, some of which were marked with an asterisk meaning they were mandatory to reply to.

Two hypotheses were set:

H1: Single-major and double-major students of both study cycles are familiar with the term artificial intelligence (AI),

H2: Google Translate is the most commonly used AI tool by all EL students.

As expected, both hypotheses were proven, confirming the authors' predictions, considering that we live in the 21st century and that students participating in the research belong to a younger generation familiar with cell phones, the Internet, and all other wonders of modern technology. Furthermore, this research proved the hypotheses and confirmed that AI tools are present among us; they are part of our everyday lives and will be even more integrated into our lives with future generations.

However, this research does not provide a general picture of using AI tools among students of the University of Mostar because the sample included only 69 students who were willing to participate. The authors do not consider that the results would have been much different had more EL students participated in the research.

Nevertheless, the authors think that this research could be extended to some other study groups (e.g., IT students), in which case the results would be different considering the types of AI tools used by those students in the IT profession. Nevertheless, the authors consider that students of all study groups do use and are familiar with AI tools, but the types of tools they use mostly depend on what they want to achieve.

Artificial intelligence is here and is very present among us and cannot be avoided.

There are many examples of positive uses of artificial intelligence, but there are some negative as well.

Finally, as with everything new, artificial intelligence is good and can be good if used modera-

tely and only to serve humans and make their lives easier and better.

Artificial intelligence tools can never replace humans because humans created artificial intelligence tools, not vice versa.

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ALATI UMJETNE INTELIGENCIJE U UČENJU STRANOGA JEZIKA

SAŽETAK

Živimo u 21. stoljeću. Ništa nije isto kao što je bilo prije 10 godina, a da ne spominjemo prije 50 ili više godina. Sve se promijenilo. Živimo u svijetu brze komunikacije, u kojemu je najveći problem vrijeme, odnosno nedostatak istoga. Želimo sve, odmah i sada. Živimo život u kojemu u isto vrijeme obavljamo previše stvari i često se čini da 24 sata nisu dovoljna da završimo sve što trebamo. Potreba za nekakvom pomoći očitija je nego ikada prije i u tu svrhu ljudi su izumili strojeve da im olakšaju život. Danas vidimo i posjedujemo uređaje o kojima smo samo mogli sanjati ili smo ih samo mogli vidjeti u filmovima znanstvene fantastike prije 50 i više godina, npr. *iPhonei*, roboti, bespilotne letjelice, različiti alati i softveri koji nam pomažu da učimo nešto, kupujemo putem interneta itd. Umjetna inteligencija sada je prisutna skoro svugdje. No, autore ovoga rada zanima primjena alata umjetne inteligencije u učenju engleskoga jezika. Središnji dio rada čini istraživanje o tome koriste li studenti Engleskoga jezika i književnosti na Filozofskome fakultetu Sveučilišta u Mostaru alate umjetne inteligencije u svome učenju jezika. U tu svrhu napravljen je upitnik u *Google* obrascu koji sadrži 11 pitanja i studenti su zamoljeni da ga ispune. Ukupan broj studenata koji su sudjelovali u istraživanju jest 69. Postavljene su dvije hipoteze: prva – da su studenti Engleskoga jezika i književnosti svih studijskih godina upoznati s terminom umjetne inteligencije; druga – da studenti Engleskoga jezika i književnosti najviše koriste *Google prevoditelj* kao alat umjetne inteligencije u svome učenju jezika. Obje su hipoteze potvrđene. Unatoč činjenici da je samo 69 studenata sudjelovalo u istraživanju, može se reći da su rezultati reprezentativni jer pružaju jasan uvid u stvarnu i trenutačnu situaciju kada je riječ o korištenju alata umjetne inteligencije među studentima Engleskoga jezika i književnosti u procesu učenja jezika i mogu poslužiti kao dobra osnova za neka buduća detaljnija istraživanja.

Ključne riječi: upitnik; *Google* obrazac; studenti Engleskoga jezika i književnosti; učenje engleskoga jezika; umjetna inteligencija (UI); alati umjetne inteligencije