Popularity and usefulness of artificial intelligence tools. A case study of university students

Oskar Szumski
University of Warsaw
Warsaw, Poland *oskar.szumski@uw.edu.pl*

Damian Dziembek
Czestochowa University of Technology
Częstochowa, Poland *damian.dziembek@pcz.pl*

Karol Kuczera
University of Szczecin
Szczecin, Poland *karol.kuczera@usz.edu.pl*

Abstract

The aim of the article is to analyze the popularity and usefulness of artificial intelligence (AI) tools among higher education students and to examine how AI influences their academic, professional, and personal lives. The study was conducted on a sample of 104 students in Poland in 2025. The results indicate that chatbots and AI search engines are the most frequently used tools, and students primarily perceive AI as support in the learning process, work organization, and information acquisition. AI serves a complementary role rather than replacing traditional methods of education and work. Students show openness to the automation of routine tasks while emphasizing AI's limitations in areas requiring interpersonal skills. The study provides up-to-date data on the integration of AI in students' daily lives and may serve as a starting point for further research on the role of AI in education.

Keywords: Higher education, AI tools usefulness, Artificial intelligence.

1. Introduction

In recent years, tools based on artificial intelligence (AI) have gained significant importance not only in business but also in higher education. Increasingly, they support students in a wide range of tasks and processes such as information retrieval, content creation (texts, code, graphics), data analysis, preparation of projects, as well as learning and knowledge acquisition. As a result, AI tools are complementing traditional methods of education, becoming everyday technologies for many students [14], [7].

While AI can enhance learning effectiveness, facilitate access to educational resources, personalize the learning process (e.g., by helping understand complex topics, reducing stress related to studying, increasing motivation, and improving work organization), and provide quick support in content creation and error correction - as well as develop digital, language, or analytical skills [9], [13], [10] - there are also notable concerns. These include the potential impact of AI on students' intellectual autonomy, challenges in assessing the quality of generated content, a possible decline in the quality of acquired knowledge, and risks of academic integrity violations [3], [5], [2].

Despite the growing number of publications devoted to the use of AI in education [6], [8], [12], [1], there is still a lack of up-to-date empirical research showing how and why students use specific AI tools, which tools are the most popular, and how students evaluate their usefulness. Particularly relevant is the question of whether AI tools serve as a source of inspiration and support, or whether they play a central role in students' learning processes, work organization, and skills development.

The aim of this article is to examine the popularity and perceived usefulness of AI tools among higher education students, while also exploring how students currently use these

tools and how they perceive the role of AI technology across three key spheres of life: university, work, and personal life. By integrating these perspectives, the study seeks to highlight differences between these domains and provide a comprehensive picture of student life in the context of increasing AI adoption. Specifically, the study seeks to answer the following research questions:
RQ1: Which AI tools are most popular among students?
RQ2: How much time do students spend using AI tools?
RQ3: Which AI tools are considered the most useful by students?
RQ4: What are the reasons and benefits for students using AI tools?

By answering these questions, the authors aim to reveal not only students' preferences regarding specific AI tools, but also the motivations behind their choices and the ways in which AI tools are integrated into their daily academic activities. The results may serve as a basis for further in-depth research and contribute to a better understanding of the role AI plays in the educational process in higher education.

2. Presentation of research findings

To determine the popularity and usefulness of AI tools among students, the authors surveyed 104 university students in Poland in 2025. The survey included 104 university students who had studied for at least two years and had experience and basic knowledge of AI tools. The distribution of the students in terms of their knowledge was quite proportional: 50% of the 2nd year students and 50% of the 3rd year management students participated in the survey. The questionnaire was developed based on a comprehensive review of the relevant literature and existing research instruments employed in studies addressing similar topics. The instrument comprised nine closed-ended questions (predominantly multiple-choice) and one open-ended question. Additionally, it incorporated items utilizing five-point Likert scales (ranging from 1 – "strongly disagree" to 5 – "strongly agree") and ranking questions, wherein respondents were requested to order specified factors according to their perceived importance.

The preliminary version of the questionnaire underwent content validation by two subject matter experts, who evaluated its content validity and alignment with the research objectives. Subsequently, a pilot study (N=20) was conducted to identify ambiguous wording and assess the overall clarity of the instrument. The survey was conducted using the CAWI (Computer Assisted Web Interview) method, in which the respondent completed a questionnaire posted on a website. The survey was administered online via the Google Forms platform. Participation was voluntary and anonymous, with informed consent obtained from all respondents prior to their engagement with the questionnaire. MS Excel was used to process and analyse the data.

In the first question, students were asked about the number of hours spent using various AI tools. To follow up and elaborate on this question - students were asked about the number of hours they spend per day using AI tools. The respondents' answers are shown in the chart below.

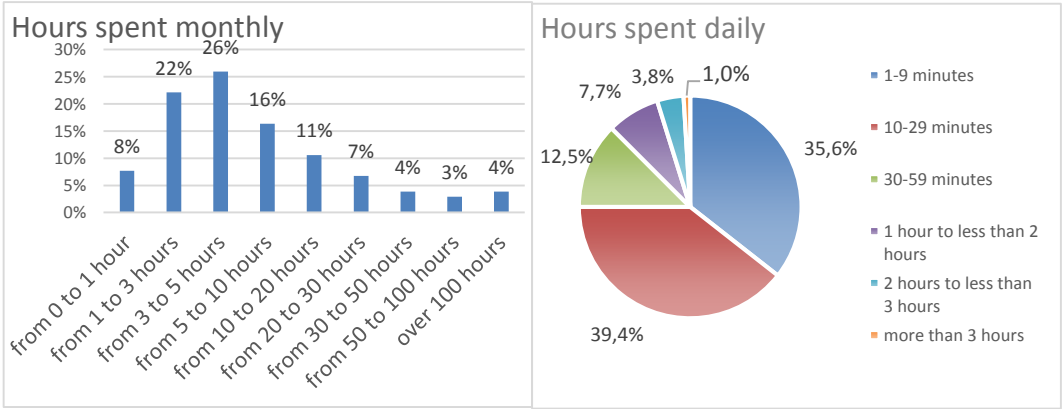

Fig. 1. Number of hours spent using AI tools

The survey shows that the largest group are students using AI tools for between 3 and 5 hours

per month (27%). Overall, more than half of the respondents (56%) report using AI tools for a maximum of 5 hours per month, suggesting that the majority of students use AI tools sporadically and occasionally. Another clear group (16%) uses AI tools for 5 to 30 hours per month, which may indicate more regular use of AI tools. Intensive use of AI tools (more than 30h) is declared by 11% of the students surveyed. This group of students uses AI tools practically every day and it can be inferred that they are enthusiasts of new technologies such as artificial intelligence. Some students use AI tools particularly intensively, i.e. more than 100h, which may indicate their advanced technological competence or experimental approach to AI. However, it should be noted that a certain group of students (8%) use AI tools very rarely (less than 1 hour per month), which may indicate a lack of need to use such technologies or still insufficient knowledge of students regarding their capabilities and operating principles.

The largest group of students (75%) use AI tools for a maximum of half an hour per day, meaning that AI tools act more as an ad hoc support for learning and knowledge acquisition. Only 13% of students use AI for 30-59 minutes per day, while 13% of students use AI tools for more than one hour per day. Only 1% of students exceed the threshold of using the tools for more than 3 hours per day, which should be interpreted that there are not many very tech-savvy students (including AI enthusiasts) and, in addition, the lack of students declaring the use of AI tools for more than 5 hours per day indicates that these solutions are not seen as the main working environment, but rather as auxiliary tools, often complementing traditional learning and knowledge acquisition methods.

In the next question, students were asked to indicate which tools they had used in the last month to support their education and knowledge acquisition. The results are shown in the chart below.

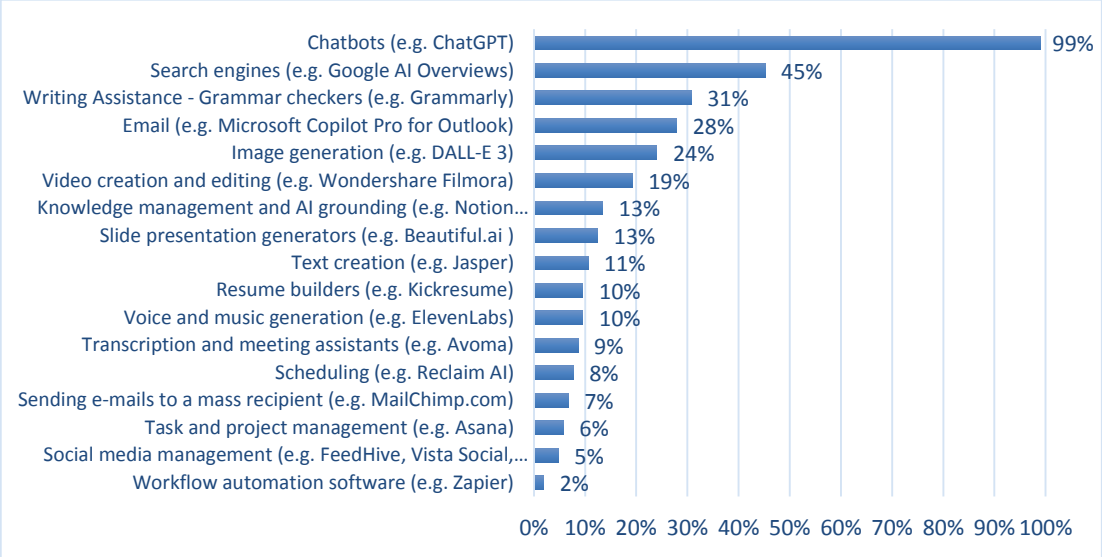

Fig. 2. Popularity of AI tools among students (monthly analysis)

Analysis of the data allows us to conclude that by far the most popular AI tool is chatbots, which were used by almost every student (99%) in the last month. This reflects the key role of conversational models (e.g. ChatGPT) as the first point of contact with AI, also indicating that it is a particularly relevant technology for supporting education and knowledge development. The second most popular were AI-based search tools (e.g. Google AI Overviews), which were used by two-fifths (45%) of respondents, indicating significant student confidence in intelligent mechanisms to support the information search and verification process. This was followed by language proofreaders (31%) and email assistants (e.g. Microsoft Copilot Pro for Outlook) with 28% - indicating that students often use AI tools to streamline and organise written communication. In contrast, tools such as image generation (e.g. DALL-E 3) and video editing (e.g. Wondershare Filmora) and automatic presentation creation (e.g. Beautiful.ai) were used by 24 %, 19 % and 13 % of students respectively, confirming the trend of using AI to prepare multimedia materials and creative multimedia projects. Less popular (between 13% and 8% of indications) are AI tools for knowledge management (which is related to the fact that a significant amount of time is required to create a knowledge base), text creation (which may be

due to the fact that Jasper can be replaced by ChatGPT), voice and music generation (mainly a solution for students dealing with multimedia), CV creators (which may be due to the fact that students during the research period were not interested in looking for/changing jobs, but this may change with the end of the academic year), scheduling (Reclaim AI can easily be replaced by other popular applications e.g. Google Calendar) and transcription and meeting assistants (platform compatibility and permission to record required). Although these tools are quite specialised and supportive in nature (mainly dedicated to passionate students or those doing various additional projects), for students they do play a role in specific educational and organisational tasks. AI tools for mass emailing (7%), social media management (5%) and workflow automation (2%) were the least popular. The low popularity of these AI tools may be due to the fact that they are dedicated to those with specific organisational needs, that they are of little use in everyday education and knowledge acquisition, and that students are not very aware of their existence.

Particularly relevant was the question to identify the AI tools that are most useful to students from an educational and knowledge acquisition perspective. Students ranked the distinguished groups of AI tools, and each rank of a given item was awarded a fixed number of points. The final usefulness was determined as the sum of the product of the rank of a given AI tool and the number of points awarded, which was divided by the number of ranks for the AI tools. Students ranked the distinguished groups of AI tools, and each of the ranks received a number of points (from 1 point for the least useful to 16 points for the most useful). The usefulness of a given group of AI tools was determined as the sum of the products of the number of points awarded and the importance of the position (rank) of a given tool, which was finally divided by the number of ranks (16) for AI tools.

Furthermore, as the vast majority of students work or have worked in various companies or organisations (65% of the students surveyed currently work part- or full-time), the question was asked - which AI tools do you think are most useful in your professional/work life? As in the earlier question, students ranked the AI tools highlighted, which enabled them to be scored. The results of the survey regarding the popularity of AI tools during study/learning and in professional/work life are presented in chart below.

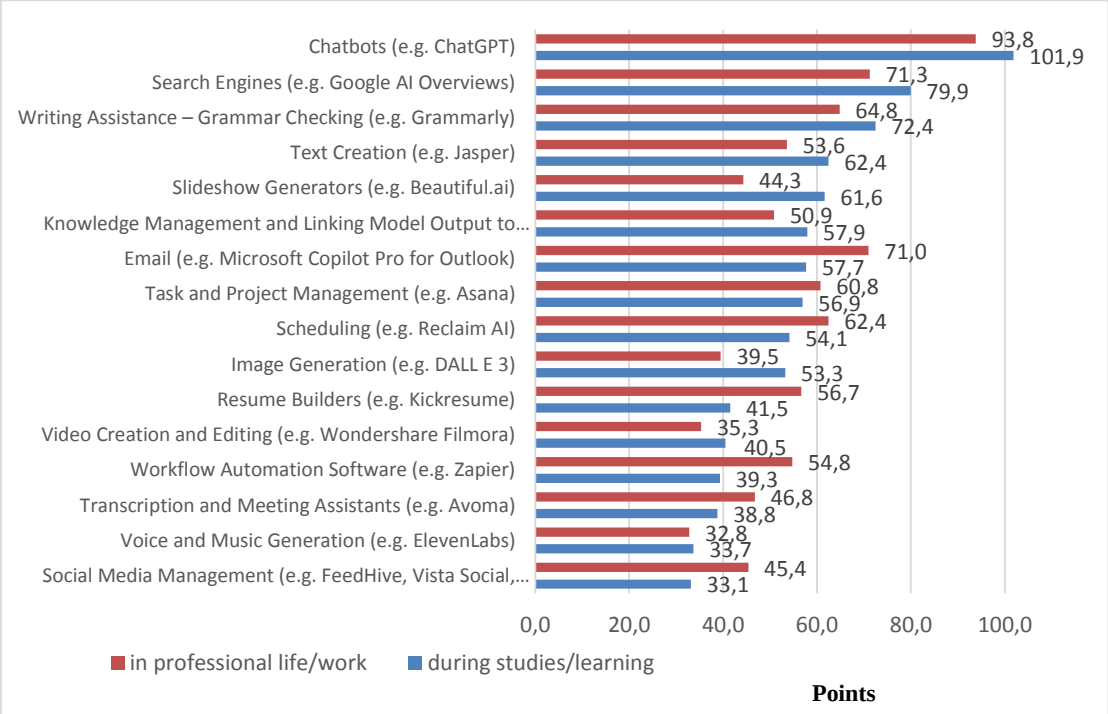

Fig. 3. Usefulness of AI tools during studies/learning and in professional life/work

The most useful AI tool according to the students during their studies/learning was chatbots which scored 101.9 points, which allows us to conclude that students perceive conversational AI models as the most versatile and effective source of help in formulating ideas, conducting dialogue, editing texts, formulating various hypotheses and quickly verifying information. The second most useful AI tool is AI search engines (79.9 points) and the third is grammar

correctors (72.4 points). The high ratings for the above tools indicate that intelligent contextual search (which allows faster access to source materials) and assistance in writing and checking the linguistic correctness of texts (which improves the quality of written papers, while teaching the correct style of writing papers), are regarded by students as important substantive and formal support in their daily education. Text generators (e.g. Jasper) and automatic slide design tools (Beautiful.ai) also scored relatively high at 62.4 and 61.6 points respectively, indicating that they are regarded by students as valuable in preparing essays, reports and presentations - although they may require more skill than chatbots or search engines. Average scores (above 50 points) were given to AI tools for knowledge management, in the area of mail (e.g. MS Copilot PRO), task and project management and scheduling, which can be interpreted that students value the possibilities of automating daily tasks and work, as well as administrative and organisational processes.

Above all, this type of tool allows students to reduce their time (e.g. preparing the necessary materials or interacting within teams). More than 50 points were also scored by image generation tools (e.g. DALL-E 3), indicating the important role of automatic generation of graphics within education or as part of students' personal interest in the possibilities of generating images and testing such AI tools. Video (40.5 pts) and audio (33.7 pts) generation tools play a less important role, which may be due to the low need for multimedia generation in the course of studies and little knowledge or limited awareness of this type of solution. The least useful (below 40 pts) according to students are CV generation, process automation, transcript and meeting assistants and social media management tools which may be due to little need to use them during their studies in economics or the need to master specific interfaces. The use of these tools also tends to depend on the stage of study (e.g. CV generation will be more important when students are involved in recruitment processes) or participation in study clubs (multimedia project creation capabilities or process automation or social media management skills may then be important).

When examining the usefulness of AI tools in working/working life - chatbots and search engines with AI (similar to the usefulness of tools during studies/education) ranked in the first two places (93.8 and 71.3 points respectively). This allows us to conclude that students perceive the above tools as crucial and universal regardless of whether they relate to study/education or work/life. These tools can be particularly useful for identifying, scripting and supporting different action options, identifying opportunities and risks for projects, action ideas for improving processes and optimising task execution, searching for necessary information, quickly verifying different information, etc. As a result, chatbots and search engines act as assistants and advisors for working students. The next places went to e- mail assistants (71 points) and language proofreading tools (64.8 points), which, according to students, can be very useful in the area of streamlining business communication and quickly creating correct documents in different languages. Scheduling and task management tools (62.4 and 60.8 points respectively) are also seen by students as important solutions to support time management or task structuring. A high number of points were also awarded to CV-building (56.7 points), process automation (54.8) and text creation (53.6 points) tools, which students believe are/may be important in supporting business activities. The above tools improve planning and organisation of work which, as a result, may indicate students' interest in solutions to improve work productivity. Other AI tools, i.e. knowledge management and transcription and meeting assistants, are of slightly lesser importance, mainly supporting areas such as project management, analysis or e-learning, but their role may vary depending on the specifics of the job and the business profile. The least useful in the students' opinion in the workplace or professional life are AI tools to support multimedia creation (although the role and importance will undoubtedly be higher in the case of the media, marketing, training industry). The low usefulness of these types of AI tools may also reflect students' less experience in the professional application of these tools.

In the next question, students were asked to indicate to what extent (scale from 1 to 5) they would like AI to step in and replace workers in several key areas of activity in the company. The averaged results of the survey in terms of the expected degree of automation of selected areas of employee activity by AI in companies are presented in the chart below.

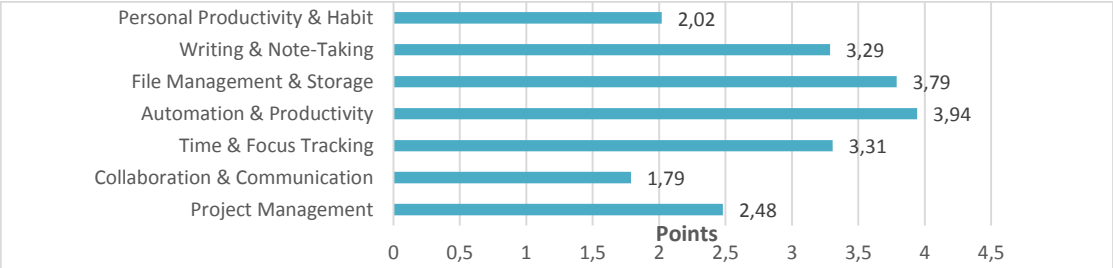

Fig. 4. Students' preferences regarding the level of replacement of company employees by artificial intelligence in selected areas of activity

The analysis of the survey results allows us to conclude that the most accepted area of employee activity that can be taken over by AI in companies is: automation and productivity (3.94 pts) perceived primarily in terms of its ability to speed up the execution of typical activities, reduce costs and increase efficiency as well as improve decision-making processes and, as a result, optimise resource management. This was followed by the areas of file management and storage (3.79 points), time recording and focus (3.31 points) and writing and note taking (3.29 points). The high values for these categories suggest a perception of AI as an effective support for routine technical tasks. In these areas, respondents perceive AI's potential to increase efficiency, reduce human error and relieve employees of duties and tasks with a relatively low degree of creativity or emotional involvement, but which require regularity and precision. A moderate readiness to replace employees by AI concerns the area of project management (2.48 points). It can be concluded that students are cautious about delegating these activities to AI due to the fact that project management is a strategic activity that requires teamwork and is characterised by considerable diversity in terms of the tasks involved. However, averages above 2 points indicate that students see the potential for AI to support staff activities in the area of human project management (e.g. in the areas of work planning and scheduling, risk analysis, resource control). In contrast, low averages were obtained in areas such as collaboration and communication (1.79 pts) and personal productivity and habits (2.02 pts), indicating that students believe that activities related to interpersonal relationships, interaction, motivation, team communication or the development of individual competencies require the actions and presence of employees (including empathy or contextual understanding) and should not be completely delegated to AI. Students are therefore open to the introduction of a hybrid management model in which AI supports employees but does not replace them (especially in soft aspects). The results show a diversity of students' preferences towards the automation of activities by AI, ranging from a strong acceptance in technical-procedural operational areas characterised by a high degree of repetition and a low level of human interaction to a strong scepticism in spheres requiring emotional intelligence and interpersonal contact.

The next question asked about students' perceptions of the benefits of using AI in different areas, i.e. in education and knowledge acquisition, in professional activities and outside of study and work. As a result, the answer to the fourth research question (RQ4) can be determined, i.e. what are the reasons students use AI tools. The Fig. 5 shows the results of the research.

2.1 Perceived benefits of using AI in education - student views.

The data shows five main areas in which students see the benefits of using AI in education. The most frequently cited benefit was the ability to search for information and knowledge (29%), suggesting that students see AI primarily as a smart tool for accessing knowledge - fast, convenient, allowing them to get answers immediately and expanding their learning context. The second most cited benefit was assistance with assignments and projects (27%). This shows the students' practical approach - they see AI as operational support for solving specific academic problems, group work or preparing coursework. In third place was assistance with learning and development (18%), indicating AI's role as a teaching assistant and a source of inspiration for furthering knowledge. The benefit cited as fourth was document creation and editing (17%), i.e. the use of AI to support written work, text editing, and content generation. In last place, the benefits of AI in the educational process were indicated efficiency and speed

(9%), which may indicate that students value first and foremost such advantages as the quality and functionality of AI tools and only then their speed and efficiency. In summary, it can be concluded that students perceive AI not only as a set of tools for automating tasks but also AI tools are an important part of the educational process for them, i.e. it is an interactive environment for them to support the process of learning, critical thinking, extending knowledge and solving various didactic tasks.

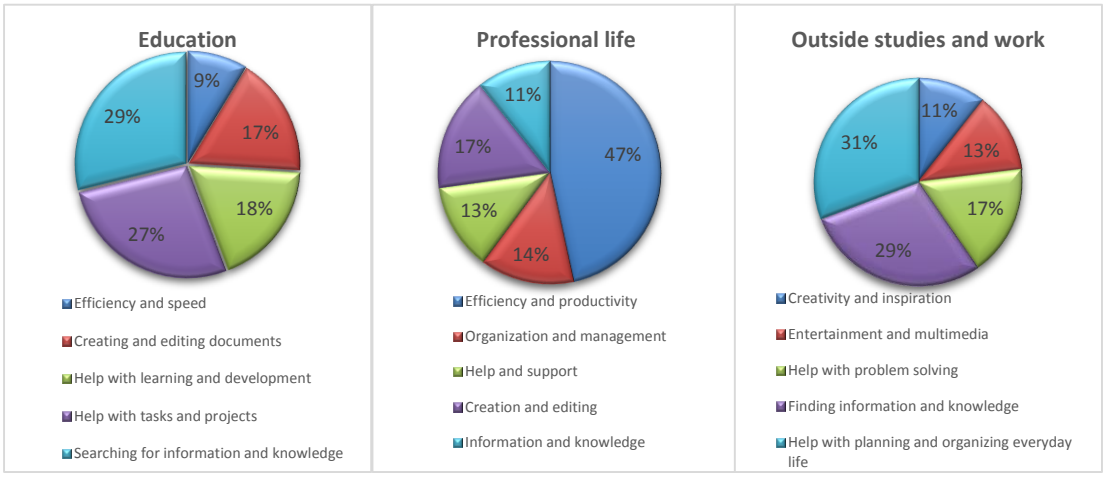

Fig 5. Perceived benefits of AI in education, work life and private life

2.2 Perceived benefits of using AI in professional life - students' opinions.

An analysis of the data on the perceived benefits of using artificial intelligence tools in a professional environment shows that students see the greatest potential of AI in terms of efficiency and productivity (47%). This result clearly indicates that AI is primarily perceived as a technology to increase productivity (e.g. increasing the speed and quality of tasks performed). Respondents identify AI as a key factor in optimising work - both in terms of automating repetitive activities and supporting decision-making processes. Creating and editing functions came in second place (17%). This result suggests that AI is valued by students as a support for document creation and creativity, in areas such as editing content, designing presentations, generating graphic material or writing documents. This was followed by organisation and management (14%) and help and support (13%). On the one hand, this may reflect the growing importance of AI tools in task planning, time and schedule management, and on the other hand, the perception of AI as an assistant in problem solving and performing complex procedures. The information and knowledge category received the relatively lowest percentage of indications (11%), which may indicate that students see AI as an operational tool rather than a source of factual knowledge in a professional context. In contrast to education, the dominant value of AI in professional work is practical utility (results) and operational functionality.

A comparison of the survey results reveals significant differences in the perception of the usefulness of AI tools in two key areas of student activity: education and work. The most important finding is a clear reversal of priorities, as:

- In education, students value AI most highly for access to information and knowledge (a total of 47% of indications in the categories "information retrieval" and "assistance in learning and development"). In this context, AI has a cognitive and educational function, supporting the processes of learning, exploration and understanding.
- in the workplace, the role of AI as a tool for efficiency and productivity is dominant, with as many as 47% of respondents identifying this category as the most important. This suggests an instrumental and practical approach by students to AI in the work environment as a support for task optimisation, automation and productivity enhancement.

Noteworthy is the relatively equivalent rating of benefits for the 'creating and editing' (17%) and 'help and support' (13%) categories in both contexts. This means that students perceive AI as a useful tool to support production and creative processes - regardless of whether they relate to learning or work. Similarly, the category organisation and management scored identically

(14%) in both contexts, which may suggest that planning, scheduling or structuring tasks with the help of AI is rated similarly in both education and work.

2.3 Perceived benefits of using AI outside of work and study - student views.

From the survey results, it can be concluded that students recognise the significant potential of artificial intelligence not only in an educational or professional context, but also in everyday life. The most important benefits (31%) appear in the area of support in planning and organising daily life. This includes, for example, time management, reminders, planning meals, shopping, travel or schedules. This suggests a growing integration of AI tools with personal assistant applications and their use to improve personal productivity. Other benefits include finding information (29%) and helping to solve problems (17%). This shows that AI is becoming students' first source of answers, recommendations and a tool to support everyday decision-making - from technical glitches to health to social issues. As a result, AI enables students to easily access knowledge and solutions. For many students, the benefits of AI also relate to entertainment (13%) and creativity and inspiration (11%) and their application is mainly concerned with generating artistic content, interactive writing, creating music, planning various leisure activities or finding ideas to solve various types of problems. The relatively lower share of the entertainment and creativity categories may indicate that, although AI is perceived as useful and beneficial in these areas, they are not the key motive for use - pragmatic utility prevails.

3. Conclusions

The conducted study allows for formulating a number of important conclusions regarding the use of artificial intelligence (AI) tools by university students and their perception of the role of these technologies in various spheres of life – educational, professional, and personal.

First and foremost, the analysis of the results indicates that students view AI tools as functional support that complements traditional methods of learning, working, and organizing daily tasks. The most popular tools are chatbots (e.g., ChatGPT), used both for educational and professional purposes. They are perceived as the most versatile and helpful AI tools—facilitating thought formulation, quick information retrieval, and supporting content creation. Besides chatbots, the most useful tools included AI search engines and language correction tools, valuable in both study and work contexts. Similar, albeit more general conclusions based on a smaller number of AI tools can be found in other studies (e.g., [10]). Other authors have based their analysis on AI use cases, with the main applications being correspondence and document creation, personalized recommendations, and AI-assisted searching [4].

In the educational context, students particularly appreciate AI for its ability to quickly search for information, assist in completing tasks and projects, and support learning and development. AI here plays a cognitive and didactic role—supporting learning processes, competence development, and solving academic problems. In professional applications, the role of AI shifts—the dominant perception is that of a tool that increases productivity, automates repetitive tasks, and supports work organization. Students value AI for its ability to optimize tasks, plan, create documents, and manage time efficiently. There is a clear shift from a cognitive function toward an operational and instrumental role. In daily life, AI mainly supports planning and organization—from time management and shopping planning to solving everyday problems. Students also recognize its potential in entertainment and creativity, though these are less significant motives for using these tools. The study also shows that most students use AI moderately—most often up to 5 hours per month. Only a small group uses these technologies intensively, which may be due to higher technological competence or strong interest in new solutions. Other research [11] indicated that over 41% of students used AI in non-academic applications; however, that study investigated only 5 categories, while the current research covers 16 groups of tools.

Students demonstrate a high openness to collaborating with AI, especially for routine and technical tasks. At the same time, they are skeptical about fully replacing humans with AI in areas requiring empathy, creativity, and interpersonal communication. They prefer a hybrid

model in which AI supports but does not eliminate human involvement.

The results presented in the article provide up-to-date and cognitively significant information about students' attitudes, preferences, and motivations regarding artificial intelligence tools, which may serve as a basis for further in-depth research and for shaping strategies for integrating AI into higher education. Although the study provides valuable insights, it is subject to several important limitations. First, the sample of 104 students from economics and management fields was non-representative, which limits the generalizability of the findings to the broader student population (in particular, results may differ among students in technical or humanities disciplines), both in Poland and globally. Second, due to the rapid development of artificial intelligence, the relevance of the findings may diminish over time.

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