

“CHATGPT as a knowledge-support tool: Perceptions of its professional use among working students in Poland”

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CHATGPT AS A KNOWLEDGE-SUPPORT TOOL: PERCEPTIONS OF ITS PROFESSIONAL USE AMONG WORKING STUDENTS IN POLAND

Abstract

Generative artificial intelligence increasingly supports knowledge work in education and professional settings, yet its usefulness remains underexplored among people who combine study and employment. This study examines how working students perceive ChatGPT's usefulness in selected professional applications. The study uses data from a quantitative online survey of 419 working students from five age groups conducted in Poland between April and June 2024. The questionnaire measured current and expected usefulness of ChatGPT in selected professional roles, motives for use, and the most frequently used version of the tool. The analysis used Kruskal-Wallis tests, post-hoc multiple comparisons, Cochran's Q test, planned McNemar comparisons, Pearson's chi-square tests, and effect-size measures. Most respondents used the Free version ($n = 329$), while smaller groups used Premium ($n = 67$) or Other variants ($n = 23$). Information retrieval was the most frequently reported motive for using ChatGPT ($n = 298$; 71.1%), followed by assistance in learning new skills ($n = 249$; 59.4%). Age-related differences appeared in the current assessment of ChatGPT as a customer relations specialist ($p = 0.0018$) and secretary ($p = 0.0083$), with respondents aged 40-50 assigning higher ratings in these roles. Younger respondents reported using ChatGPT for skill development more often than older respondents ($p < 0.001$). ChatGPT version also differentiated use: Premium users more often reported routine document preparation, code generation, and data analysis, while Other-version users more often reported code generation and data analysis. The findings show that working students perceive ChatGPT primarily as a knowledge-support tool rather than a substitute for professional roles.

Keywords

ChatGPT, AI, knowledge, students, employment, competencies, acceptance, education, Poland

JEL Classification

M15, O33, J24, I23

INTRODUCTION

Artificial intelligence has become an important factor shaping contemporary work, learning, and knowledge processing. The rapid development of generative artificial intelligence, including large language models such as ChatGPT, has expanded the range of digital tools that can support content creation, information retrieval, data interpretation, communication, and problem-solving. As a result, generative AI increasingly affects not only organizational processes but also individual practices of acquiring, processing, and applying knowledge.

This development creates a relevant scientific problem for knowledge and performance management. The usefulness of generative AI cannot be assessed only through the technological capabilities of the tool. It also depends on how users perceive its usefulness, in which tasks they consider it valuable, and how they integrate it

into educational and professional activities. This is particularly important because tools such as ChatGPT are often adopted first at the individual level, before they become part of formal organizational procedures.

Working students represent a particularly important group in this context. They combine academic education with employment and therefore operate at the intersection of higher education and professional practice. This dual position allows them to experience ChatGPT both as a learning-support tool and as an instrument for supporting work-related tasks. Their perceptions may therefore provide insight into early patterns of generative AI use in knowledge work, skill development, and professional role support.

However, the scientific problem remains insufficiently recognized. Existing discussions on generative AI often focus on its general technological potential, educational applications, or organizational implementation, while less attention is paid to how working students perceive its usefulness in selected professional contexts. This creates a need to examine ChatGPT not as an abstract innovation or a fully implemented organizational system, but as a knowledge-support tool evaluated by individuals who simultaneously study and work.

1. LITERATURE REVIEW AND HYPOTHESES

Generative artificial intelligence has increasingly been discussed as a technology that reshapes knowledge work, learning, and professional task performance. Unlike earlier digital tools focused mainly on automating routine operations, generative AI systems such as ChatGPT can support information retrieval, text generation, summarization, data interpretation, problem-solving, and decision preparation. In this sense, ChatGPT can be understood not only as a conversational interface but also as a knowledge-support tool used by individuals in educational and professional contexts. Recent literature shows that generative AI may enhance productivity, support knowledge-intensive work, and influence organizational learning processes (Al Naqbi et al., 2024; Ritala et al., 2023). From a knowledge management perspective, generative AI affects the creation, storage, sharing, and application of knowledge, which changes the relationship between human expertise and digital systems (Kaczorowska-Spychalska et al., 2024).

The relevance of ChatGPT for management research is also reflected in studies discussing its impact on work practices, human resource management, and management theory. Budhwar et al. (2023) argue that generative AI changes expectations toward employee skills and creates new research questions concerning the future of work, professional development, and cooperation between humans and

intelligent systems. Korzyński et al. (2023) show that ChatGPT creates a new context for management theories, including knowledge management, by supporting information acquisition, document summarization, personalization of learning, and decision-related processes. These studies suggest that the professional value of ChatGPT depends not only on its technical capacity but also on the way users perceive and integrate it into their everyday tasks.

This user-centered perspective is consistent with technology acceptance research. The Technology Acceptance Model emphasizes the importance of perceived usefulness and perceived ease of use in explaining whether individuals are willing to adopt a technology (Davis, 1989). Later approaches, including UTAUT, additionally stress the role of social influence, facilitating conditions, and individual expectations toward performance (Venkatesh et al., 2003). In the case of generative AI, perceived usefulness may concern support in learning, information search, writing, analysis, communication, and skill development. Recent empirical studies confirm that students' acceptance of generative AI is shaped by expected benefits, attitudes, learning motivation, AI literacy, trust, and perceived usefulness (Al-Abdullatif, 2024; Kanont et al., 2024; Şimşek et al., 2025). At the same time, research indicates differences between groups of users. Chan and Lee (2023) show that younger users often perceive generative AI as a tool for productivity and personalized learning, whereas teachers and older users tend to express more caution concerning risks, reliability, and regulation.

Studies on generative AI in higher education usually analyze students as learners and teachers as designers or facilitators of learning processes. In this stream, ChatGPT is often examined as a learning assistant, a tool supporting personalized education, or a technology that requires new forms of digital and AI literacy (Al-Abdullatif, 2024; Kanont et al., 2024; Zhai, 2024). However, this perspective does not fully explain how students who are also professionally active evaluate ChatGPT. Working students do not use digital tools only in academic contexts. They also encounter them in paid work, internships, professional communication, routine documentation, customer-related tasks, and competence development. Therefore, their perception of ChatGPT may be shaped by both educational and work-related experience.

The literature on work-integrated learning and employability provides a basis for treating working students as a distinct research group. Work-integrated learning is often described as a bridge between higher education and labor market requirements, supporting the development of both technical and transferable competencies (Curto-Reverte et al., 2025). Jackson (2014) shows that workplace experience can support employability skill development, although its effects depend on the quality of tasks, support, and reflection. In a later study, Jackson (2016) argues that work-integrated learning contributes to the development of pre-professional identity because students build their understanding of professional roles through observation, interaction, and reflection. Empirical evidence also suggests that work-integrated learning and co-curricular activities may improve graduate labor market outcomes (Jackson & Rowe, 2022).

This line of research is important because it shows that the transition from education to work is not limited to formal curricula. Students' employability is shaped by a combination of academic learning, workplace experience, transversal competencies, and career-related reflection. Belchior-Rocha et al. (2022) emphasize the relevance of transversal competencies for employability, while Succi and Canovi (2019) show that students and employers may differ in their perceptions of soft skills required in the labor market. Van der Baan et al. (2024) further indicate that

career coaching in higher education can support employability competence development through reflection and learning processes. Recent evidence also suggests that students and graduates may perceive paid work as a key source of practical skills when higher education is experienced as too theoretical (Kocsis & Pusztai, 2025). These findings justify examining working students as individuals who evaluate new technologies from a hybrid position: as learners, employees, and emerging professionals.

Existing research therefore points to three important observations. First, generative AI is increasingly conceptualized as a tool supporting knowledge work, productivity, learning, and knowledge management (Al Naqbi et al., 2024; Kaczorowska-Spychalska et al., 2024; Ritala et al., 2023). Second, technology acceptance studies show that perceived usefulness, motivation, trust, and AI literacy shape the adoption of generative AI in educational contexts (Al-Abdullatif, 2024; Kanont et al., 2024; Şimşek et al., 2025). Third, the employability and work-integrated learning literature shows that working students form a distinct group located between higher education and professional practice (Curto-Reverte et al., 2025; Jackson, 2016; Jackson & Rowe, 2022; Kocsis & Pusztai, 2025). However, these research streams remain only weakly connected. Studies on generative AI in education usually focus on students as learners, whereas studies on generative AI in organizations focus mainly on employees, managers, or knowledge workers. As a result, less is known about how working students perceive ChatGPT as a knowledge-support tool in selected professional contexts, despite their simultaneous exposure to academic learning and work-related tasks.

This study aims to examine how working students perceive ChatGPT's usefulness in selected professional applications, with particular attention to age-related differences, motives for use, and the version of the tool used most often. Based on the reviewed literature, the following hypotheses were formulated:

H1: Age groups differ significantly in their current and expected future assessments of ChatGPT's usefulness in selected professional roles.

- H2: Information retrieval and learning new skills are reported more frequently than other motives for using ChatGPT among working students.*
- H3: Younger respondents use ChatGPT for learning new skills more frequently than older respondents.*
- H4: The version of ChatGPT used most often significantly differentiates selected professional applications of the tool.*

nature of data collection, and the use of aggregated results for scientific purposes. The study received approval from the Scientific Research Ethics Committee of the University of Warmia and Mazury in Olsztyn (Decision No. 8/2024).

The questionnaire was part of a broader survey on ChatGPT use. Appendix A presents the questionnaire items and coding scheme used in the present study; items not analyzed in this article were omitted. This approach was adopted to ensure transparency of the variables included in the statistical analysis.

2. METHODS

The study used a quantitative, cross-sectional survey design. Data were collected through an online questionnaire conducted in Poland between April and June 2024. The questionnaire was distributed through university communication channels. It included a screening question asking whether the respondent had worked or conducted professional activity during the previous year. Only respondents who confirmed employment or professional activity during that period and provided complete information on ChatGPT use were included in the final analytical sample. This criterion was used to ensure that the study focused specifically on working students, understood as individuals enrolled in higher education who had recent work experience.

The final analytical sample consisted of 419 working students. Participation in the study was voluntary and anonymous. Before completing the questionnaire, respondents were informed about the purpose of the study, the anonymous

Respondents represented different age groups and used different versions of ChatGPT, which enabled the analysis of age-related differences and differences associated with the version of the tool used most often. The sample structure by age group and ChatGPT version is presented in Table 1.

The data show that most respondents used the Free version of ChatGPT ($n = 329$), while 67 respondents used the Premium version and 23 used Other variants, including third-party websites using ChatGPT or versions of ChatGPT used for specific functions. The largest group consisted of respondents aged 20-29, whereas respondents over 50 represented the smallest group. Therefore, age-related differences should be interpreted with caution when comparing data involving the oldest respondents.

To further characterize the working-student sample, respondents were also grouped by the sector of their recent professional activity. The results are presented in Table 2.

Table 1. Characteristics of the research sample by age group and ChatGPT version

Age groups	Number of users by ChatGPT version*			Total	
	Free	Premium	Other**	N	%
Under 20	50	2	0	52	12.4
20-29	215	44	15	274	65.4
30-39	30	5	6	41	9.8
40-50	26	14	2	42	10.0
Over 50	8	2	0	10	2.4
Total	329	67	23	419	100.0

Note: * The analysis includes only responses from participants indicating the ChatGPT version used most often. ** The "Other" category refers primarily to third-party websites using ChatGPT or versions of ChatGPT used for specific functions (e.g., through additional plugins).

Table 2. Characteristics of the research sample by sector of recent professional activity and ChatGPT version

Sector of recent professional activity	Number of users by ChatGPT version			Total	
	Free	Premium	Other	N	%
Trade and distribution	64	8	3	75	17.9
Information and communication technology (ICT)	18	22	5	45	10.7
Industrial manufacturing	34	7	2	43	10.3
Education and science	25	8	4	37	8.8
Tourism and entertainment	30	1	1	32	7.6
Finance and insurance	25	3	0	28	6.7
Transport and logistics	17	4	1	22	5.3
Agriculture and forestry	19	1	0	20	4.8
Media and communication	14	4	1	19	4.5
Food services	19	0	0	19	4.5
Construction and real estate	13	3	2	18	4.3
Healthcare and social care	9	1	0	10	2.4
Charity and public benefit activities	9	1	0	10	2.4
Professional services and consulting	5	1	1	7	1.7
Public administration	6	1	0	7	1.7
Energy and natural resources	3	1	2	6	1.4
Other (e.g., sports industry)	19	1	1	21	5.0
Total	329	67	23	419	100.0

The largest groups of respondents declared recent professional activity in trade and distribution ($n = 75$; 17.9%), information and communication technology ($n = 45$; 10.7%), industrial manufacturing ($n = 43$; 10.3%), education and science ($n = 37$; 8.8%), tourism and entertainment ($n = 32$; 7.6%), and finance and insurance ($n = 28$; 6.7%). This indicates that the sample included respondents from diverse sectors, although several categories were represented by small numbers of respondents. Therefore, the sector was used only to describe the sample and was not included as a grouping variable in the hypothesis testing.

The research instrument was an author-developed questionnaire designed to measure respondents' perceptions of ChatGPT's usefulness in selected professional applications and their motives for using the tool. The questionnaire covered three analytical areas. The first area concerned the current and expected usefulness of ChatGPT in selected professional roles, including customer relations specialist, secretary, SEO copywriter, content writer, manager, and data analyst. These roles were selected to represent different types of knowledge-related and communication-related tasks, ranging from routine administrative support and content creation to

analytical and managerial work. The second area concerned motives for using ChatGPT, including information retrieval, learning new skills, assistance in writing routine documents, essays, or reports, code generation, support in data analysis, and other purposes. The third area collected respondent characteristics, including age group, sector of recent professional activity, and the version of ChatGPT used most often.

Respondents assessed ChatGPT's usefulness using a five-category ordinal scale from 0 to 4, where 0 indicated no knowledge in this area, 1 definitely not useful, 2 neither useful nor not useful, 3 rather useful, and 4 definitely useful. Motives for using ChatGPT were coded as binary variables, where 0 indicated that a given motive was not selected and 1 indicated that it was selected. Categorical variables were coded numerically to enable statistical analysis. Internal consistency of the scale measuring ChatGPT's usefulness in professional roles was verified using Cronbach's alpha. The obtained value ($\alpha = 0.9112$) indicates very high internal consistency of the instrument. However, given that the scale included ratings of different professional roles, this high value may also indicate a general positive attitude toward ChatGPT across role-specific

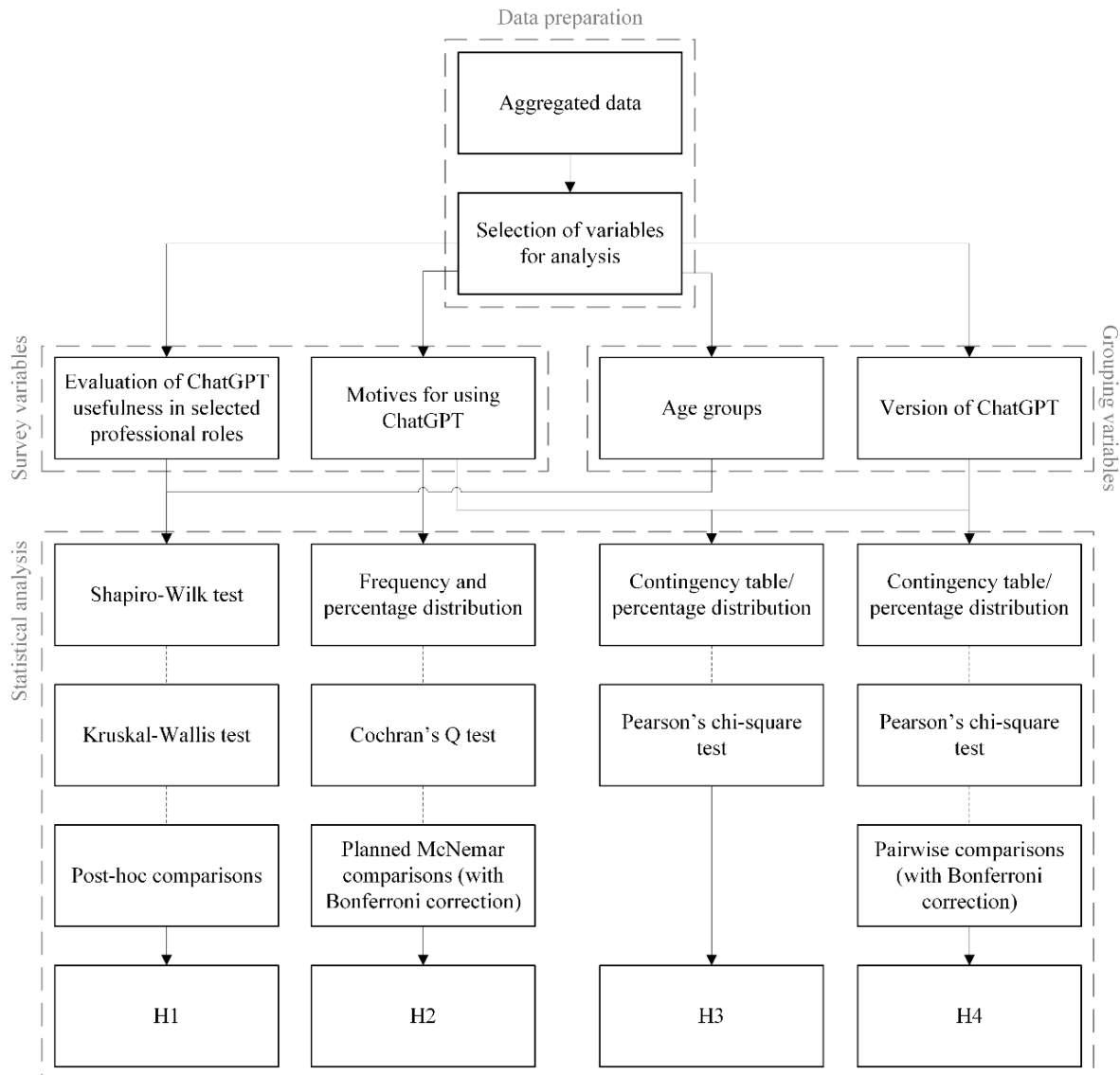


Figure 1. Data preparation and hypothesis testing procedure

ic assessments rather than only internal consistency of a homogeneous construct.

Data preparation was conducted in MS Excel, while statistical analyses were performed using Statistica 14.0.1. In the first step, data completeness and variable coding were checked. The Shapiro-Wilk test was used to assess the normality of ordinal rating variables. Because the variables did not meet normality assumptions, non-parametric methods were applied.

Age-related differences in the assessment of ChatGPT's usefulness in selected professional roles were examined using the Kruskal-Wallis

rank ANOVA test. Where global Kruskal-Wallis results were statistically significant, two-sided post-hoc multiple comparisons of mean ranks were conducted. Effect sizes for Kruskal-Wallis tests were calculated using epsilon squared (ϵ^2).

To compare the frequency of multiple binary-coded motives selected by the same respondents, Cochran's Q test was used. Since the omnibus result was statistically significant, planned post-hoc McNemar tests were conducted to compare information retrieval and assistance in learning new skills with the remaining motives. The p-values for these planned comparisons were adjusted using the Bonferroni correction for 10 comparisons.

Kendall's W was reported as the effect size for Cochran's Q test.

Associations between categorical variables were examined using contingency tables and Pearson's chi-square tests. For $H3$, the relationship between age group and the use of ChatGPT for learning new skills was tested using Pearson's chi-square test, with Cramer's V reported as an effect size. Due to low cell counts, the 40-50 and Over 50 age groups were merged for this analysis.

For $H4$, associations between ChatGPT version and each binary-coded motive for using the tool were examined using Pearson's chi-square tests. Effect sizes were assessed using Cramer's V . When omnibus results were statistically significant, pairwise comparisons between ChatGPT-version groups were conducted. The p -values for these pairwise comparisons were adjusted using the Bonferroni correction for three comparisons within each motive. Fisher's exact two-sided p -values were additionally reported for 2×2 pairwise comparisons, and Phi coefficients were used as effect sizes for pairwise comparisons. The significance level was set at $\alpha = 0.05$. The process of data preparation, variable selection, and assignment of statistical procedures to the stages of hypothesis verification is presented in Figure 1.

This procedure ensured that each hypothesis was linked to a defined set of variables and an appropriate statistical procedure before the empirical results were reported.

3. RESULTS

The results are presented according to the four hypotheses formulated in the literature review. First, age-related differences in the perceived usefulness

of ChatGPT in selected professional roles are reported. Second, the overall distribution of motives for using ChatGPT is presented. Third, age-related differences in using ChatGPT for learning new skills are examined. Fourth, differences in motives and professional applications by the ChatGPT version are reported.

To test $H1$, the Kruskal-Wallis test was used to compare age groups in their current assessment of ChatGPT's usefulness in selected professional roles. The results are presented in Table 3.

Statistically significant differences between age groups were found for the roles of customer relations specialist ($p = 0.0018$) and secretary ($p = 0.0083$). For the customer relations specialist role, the highest average rank was observed in the 40-50 age group (263.1786), while the lowest was recorded among respondents under 20 years old (169.4038). For the secretary role, the highest average rank was also observed in the 40-50 age group (262.5833), while the lowest was recorded among the youngest respondents (188.5962). No statistically significant age-related differences were found for content writer, manager, or data analyst. The result for SEO copywriter approached the conventional significance threshold ($p = 0.0583$). The effect sizes were small, with $\epsilon^2 = 0.0317$ for the customer relations specialist and $\epsilon^2 = 0.0235$ for the secretary.

Post-hoc multiple comparisons were then conducted for the roles where the Kruskal-Wallis test indicated statistically significant differences. The results for the customer relations specialist role are presented in Table 4.

The post-hoc comparison showed a statistically significant difference between respondents under

Table 3. Kruskal-Wallis test for the current assessment of ChatGPT's usefulness in selected professional roles by age group

Professional role	Average rank range		H	p-value	ϵ^2
	Min	Max			
Customer relations specialist	169.4038	263.1786	17.1199	0.0018	0.0317
Secretary	188.5962	262.5833	13.7187	0.0083	0.0235
SEO copywriter	185.4808	248.0000	9.1150	0.0583	0.0124
Content writer	194.2981	249.6500	3.8277	0.4298	0.0000
Manager	206.2117	223.5119	1.0405	0.9036	0.0000
Data analyst	194.2885	239.1905	6.2798	0.1792	0.0055

Table 4. Post-hoc multiple comparisons for ChatGPT as a customer relations specialist (current assessment)

ChatGPT as a customer relations specialist (current assessment)					
Age groups	Under 20	20-29	30-39	40-50	Over 50
Under 20	-	0.3092	0.3495	0.0019	1.0000
20-29	0.3092	-	1.0000	0.0687	1.0000
30-39	0.3495	1.0000	-	1.0000	1.0000
40-50	0.0019	0.0687	1.0000	-	0.3774
Over 50	1.0000	1.0000	1.0000	0.3774	-

20 years old and those aged 40-50 ($p = 0.0019$). No other pairwise comparisons reached the $p < 0.05$ level.

The post-hoc multiple comparisons for the secretary role are presented in Table 5.

Statistically significant differences were found between respondents under 20 years old and those aged 40-50 ($p = 0.0323$), and between respondents aged 20-29 and those aged 40-50 ($p = 0.0304$).

Descriptive statistics for the two roles with statistically significant age-related differences are presented in Table 6.

In the customer relations specialist role, the median assessment was 2 among respondents under 20 and 3 among respondents aged 40-50. The third quartile reached 4 in the 40-50 group. In the secretary role, the median was 3 in all age groups, while the first and third quartiles indicated a higher concentration of high assessments among respondents aged 40-50.

The second part of *H1* concerned the predicted future usefulness of ChatGPT in selected professional roles. The Kruskal-Wallis test results are presented in Table 7.

A statistically significant age-related difference was found only for the customer relations spe-

Table 5. Post-hoc multiple comparisons for ChatGPT as a secretary (current assessment)

ChatGPT as a secretary (current assessment)					
Age groups	Under 20	20-29	30-39	40-50	Over 50
Under 20	-	1.0000	1.0000	0.0323	1.0000
20-29	1.0000	-	1.0000	0.0304	1.0000
30-39	1.0000	1.0000	-	0.9935	1.0000
40-50	0.0323	0.0304	0.9935	-	1.0000
Over 50	1.0000	1.0000	1.0000	1.0000	-

Table 6. Descriptive statistics for roles with statistically significant age-related differences (current assessment)

ChatGPT as a customer relations specialist (current assessment)			
Age groups	First quartile	Median	Third quartile
Under 20	1	2	3
20-29	2	3	3
30-39	2	3	3
40-50	3	3	4
Over 50	1	3	3

ChatGPT as a secretary (current assessment)			
Age groups	First quartile	Median	Third quartile
Under 20	1.5	3	3
20-29	2	3	3
30-39	2	3	3
40-50	3	3	4
Over 50	3	3	3

Table 7. Kruskal-Wallis test for the predicted future assessment of ChatGPT's usefulness in selected professional roles by age group

Professional role	Average rank range		H	p-value	ϵ^2
	Min	Max			
Customer relations specialist	186.0192	251.8452	11.8170	0.0188	0.0189
Secretary	181.9231	234.3214	5.2768	0.2601	0.0031
SEO copywriter	200.9519	241.2024	4.1333	0.3883	0.0003
Content writer	201.8303	252.7857	8.8415	0.0652	0.0117
Manager	177.6500	225.0952	2.5288	0.6395	0.0000
Data analyst	184.9327	242.1786	6.8280	0.1453	0.0068

Table 8. Post-hoc multiple comparisons for ChatGPT as a customer relations specialist (predicted future assessment)

ChatGPT as a customer relations specialist (predicted future assessment)					
Age groups	Under 20	20-29	30-39	40-50	Over 50
Under 20	-	1.0000	0.3366	0.0879	1.0000
20-29	1.0000	-	0.7473	0.1622	1.0000
30-39	0.3366	0.7473	-	1.0000	1.0000
40-50	0.0879	0.1622	1.0000	-	1.0000
Over 50	1.0000	1.0000	1.0000	1.0000	-

cialist role ($p = 0.0188$). The highest average rank for this role was recorded in the 40-50 age group (251.8452), while the lowest was recorded among respondents under 20 years old (186.0192). No statistically significant differences were found for secretary, SEO copywriter, content writer, manager, or data analyst. The effect size for the only statistically significant result was small ($\epsilon^2 = 0.0189$).

Post-hoc multiple comparisons for the predicted future assessment of ChatGPT as a customer relations specialist are presented in Table 8.

Although the global Kruskal-Wallis test indicated an overall difference between age groups, none of the pairwise post-hoc comparisons reached the $p < 0.05$ level. The lowest p-value was observed for the comparison between respondents under 20 and those aged 40-50 ($p = 0.0879$).

Descriptive statistics for the predicted future assessment of ChatGPT as a customer relations specialist are presented in Table 9.

The median assessment was 3 in most age groups and 4 in the 40-50 group. The lower quartile was 2 among respondents under 20 and 3 among respondents aged 40-50. Taken together, the results support *H1* for selected professional roles, as statistically significant age-related differences appeared only in these contexts.

To test hypothesis *H2*, the overall distribution of motives for using ChatGPT was analyzed. Cochran's Q test and McNemar's tests were then conducted as planned post-hoc comparisons. The results are presented in Tables 10 and 11.

Information retrieval was selected by 298 respondents (71.1%), and assistance in learning new skills

Table 9. Descriptive statistics for ChatGPT as a customer relations specialist (predicted future assessment)

ChatGPT as a customer relations specialist (predicted future assessment)			
Age groups	First quartile	Median	Third quartile
Under 20	2	3	4
20-29	3	3	4
30-39	3	3	4
40-50	3	4	4
Over 50	3	3	4

Table 10. Frequency of motives for using ChatGPT and Cochran's Q test results

Motive for using ChatGPT	N	%
Information retrieval	298	71.1
Assistance in learning new skills	249	59.4
Assistance in writing essays, reports, etc.	151	36.0
Support in data analysis	133	31.7
Assistance in writing routine documents	120	28.6
Generating programming code	103	24.6
Other purposes	40	9.5

Note: Cochran's Q test: $Q(6) = 497.9666$, $p < 0.001$, Kendall's $W = 0.198$. Percentages indicate the share of respondents who selected a given motive. Respondents could select more than one motive.

Table 11. Planned McNemar comparisons for motives for using ChatGPT

Motive for using ChatGPT		McNemar's χ^2	df	p-raw	p-adjusted*
Information retrieval	vs Assistance in writing routine documents	122.3789	1	$p < 0.001$	$p < 0.001$
	vs Assistance in writing essays, reports, etc.	92.2771	1	$p < 0.001$	$p < 0.001$
	vs Generating programming code	138.8782	1	$p < 0.001$	$p < 0.001$
	vs Support in data analysis	119.5378	1	$p < 0.001$	$p < 0.001$
	vs Other purposes	224.6565	1	$p < 0.001$	$p < 0.001$
Assistance in learning new skills	vs Assistance in writing routine documents	69.7192	1	$p < 0.001$	$p < 0.001$
	vs Assistance in writing essays, reports, etc.	51.6978	1	$p < 0.001$	$p < 0.001$
	vs Generating programming code	114.2663	1	$p < 0.001$	$p < 0.001$
	vs Support in data analysis	67.4745	1	$p < 0.001$	$p < 0.001$
	vs Other purposes	160.8327	1	$p < 0.001$	$p < 0.001$

Note: McNemar tests were conducted as planned post-hoc comparisons after a significant Cochran's Q test. * The p-adjusted values were calculated using the Bonferroni correction for 10 planned comparisons.

was selected by 249 respondents (59.4%). Cochran's Q test confirmed statistically significant differences in the frequency of motive selection, $Q(6) = 497.9666$, $p < 0.001$, Kendall's $W = 0.198$. Planned McNemar comparisons showed that both motives were selected significantly more often than each of the remaining motives after Bonferroni correction. These results support $H2$.

examined using Pearson's chi-square test. The results are presented in Table 12.

Pearson's chi-square test indicated a statistically significant relationship between age group and using ChatGPT to learn new skills, $\chi^2(3) = 42.2769$, $p < 0.001$, Cramer's $V = 0.318$. The percentage distribution is presented in Figure 2.

To test $H3$, the relationship between age group and the use of ChatGPT for learning new skills was

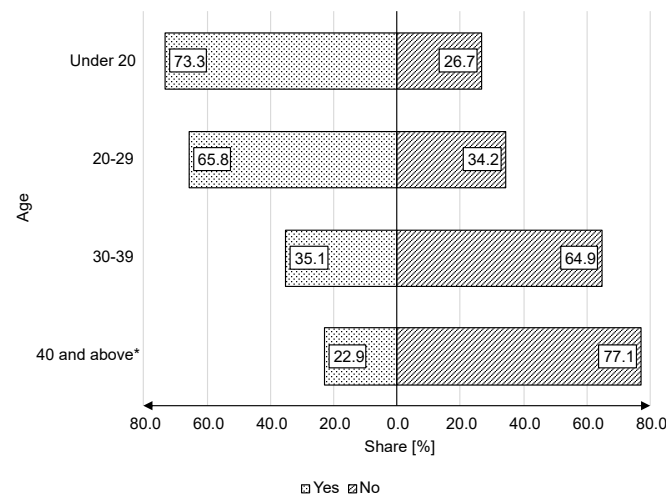
The share of respondents using ChatGPT to learn new skills was highest in the youngest groups:

Table 12. Pearson's chi-square test for using ChatGPT to learn new skills by age group

Motive for using ChatGPT	Pearson's χ^2	df	Cramer's V	p-value
Assistance in learning new skills	42.27686	3	0.318	< 0.001

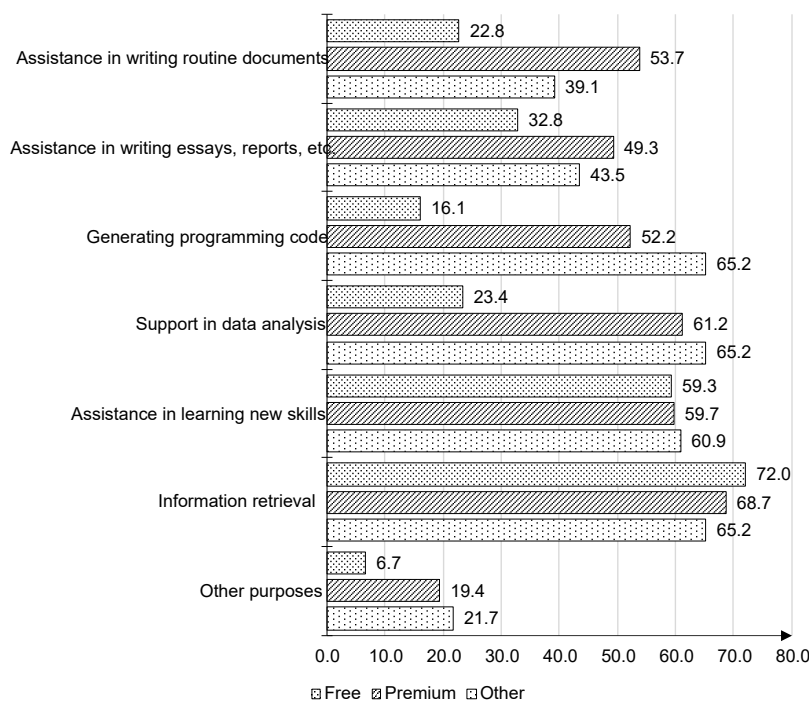
Table 13. Pearson's chi-square tests for the association between ChatGPT version and motives for using ChatGPT

Motive for using ChatGPT	Pearson's χ^2	df	Cramer's V	p-value
Assistance in writing routine documents	27.3751	2	0.2556	< 0.001
Assistance in writing essays, reports, etc.	7.1008	2	0.1302	0.0287
Generating programming code	60.8669	2	0.3811	< 0.001
Support in data analysis	49.2753	2	0.3429	< 0.001
Assistance in learning new skills	0.0253	2	0.0078	0.9874
Information retrieval	0.7226	2	0.0415	0.6968
Other purposes	14.6130	2	0.1868	< 0.001



Note: * The 40-50 and Over 50 age groups were merged due to low expected cell counts in the chi-square test.

Figure 2. Use of ChatGPT for learning new skills by age group (%)



Note: Percentages indicate the share of users within each ChatGPT-version group who selected a given motive. Because respondents could select more than one motive, percentages do not sum to 100%.

Figure 3. Motives for using ChatGPT by ChatGPT version (%)

73.3% among respondents under 20 and 65.8% among respondents aged 20-29. The share decreased to 35.1% among respondents aged 30-39 and 22.9% among respondents aged 40 and above. These results support *H3*, although the unbalanced age structure of the sample should be considered when interpreting the strength of age-related differences.

To test *H4*, associations between ChatGPT version and each binary-coded motive for using the tool were examined using contingency tables and Pearson's chi-square tests. Effect sizes were assessed using Cramer's V. The results are presented in Table 13.

The percentage distribution of motives by ChatGPT version is presented in Figure 3.

Table 14. Pairwise comparisons of ChatGPT-use motives by ChatGPT version

Free vs Premium						
Motive for using ChatGPT	Pearson's χ^2	Phi *	df	Fisher's p**	p-row	p-adjusted***
Assistance in writing routine documents	26.4057	0.2582	1	0.0000	< 0.001	< 0.001
Assistance in writing essays, reports, etc.	6.5512	0.1286	1	0.0120	0.0105	0.0314
Generating programming code	42.0391	0.3258	1	0.0000	< 0.001	< 0.001
Support in data analysis	38.0004	0.3098	1	0.0000	< 0.001	< 0.001
Other purposes	11.1711	0.1680	1	0.0032	< 0.001	0.0025
Free vs Other						
Motive for using ChatGPT	Pearson's χ^2	Phi	df	Fisher's p	p-row	p-adjusted
Assistance in writing routine documents	3.1568	0.0947	1	0.0817	0.0756	0.2268
Assistance in writing essays, reports, etc.	1.0944	0.0558	1	0.3610	0.2955	0.8865
Generating programming code	33.2616	0.3074	1	0.0000	< 0.001	< 0.001
Support in data analysis	19.4684	0.2352	1	0.0001	< 0.001	< 0.001
Other purposes	6.8773	0.1398	1	0.0232	0.0087	0.0262
Premium vs Other						
Motive for using ChatGPT	Pearson's χ^2	Phi	df	Fisher's p	p-row	p-adjusted
Assistance in writing routine documents	1.4601	0.1274	1	0.3339	0.2269	0.6808
Assistance in writing essays, reports, etc.	0.2289	0.0504	1	0.8093	0.6323	1.0000
Generating programming code	1.1681	0.1139	1	0.3358	0.2798	0.8394
Support in data analysis	0.1179	0.0362	1	0.8068	0.7313	1.0000
Other purposes	0.0584	0.0255	1	0.7713	0.8090	1.0000

Note: * Phi is reported as an absolute value because its sign depends on category coding. ** Fisher's p refers to the two-sided Fisher's exact test. *** The p-row values refer to Pearson's chi-square tests. The p-adjusted values were calculated from p-row using the Bonferroni correction for three pairwise comparisons within each motive. Values exceeding 1.0000 were set to 1.0000.

Figure 3 shows that information retrieval and assistance in learning new skills were common across all ChatGPT-version groups, which is consistent with the non-significant omnibus results for these motives. More pronounced differences were observed for specialized applications, especially generating programming code, support in data analysis, and assistance in writing routine documents. Therefore, pairwise comparisons were conducted for motives with significant omnibus associations to identify which ChatGPT-version groups differed from each other.

The strongest associations were observed for generating programming code (Cramer's $V = 0.3811$) and support in data analysis (Cramer's $V = 0.3429$), followed by assistance in writing routine documents (Cramer's $V = 0.2556$). No statistically significant associations were found for information retrieval or assistance in learning new skills, indicating that these general knowledge-support motives were common across ChatGPT versions. Pairwise comparisons showed that Free-version users differed from Premium users in all significant motive categories. Free-version users also differed from Other-version users in generating pro-

gramming code, support in data analysis, and other purposes, while differences between Premium and Other-version users were not statistically significant after adjustment.

Taken together, these results support *H4* for selected specialized applications rather than for general knowledge-support motives.

Table 15 summarizes the statistical procedures, main empirical findings, and conclusions for each hypothesis.

4. DISCUSSION

The findings provide insight into how working students evaluate ChatGPT as a knowledge-support tool in selected professional contexts. Overall, ChatGPT was perceived primarily as a tool supporting knowledge access, skill development, and selected task-oriented applications rather than as a substitute for complete professional roles. This interpretation is consistent with studies describing generative AI as a technology that supports knowledge work, information processing, content

Table 15. Summary of hypothesis testing

Hypothesis	Procedure	Main result	Conclusion
<i>H1</i>	Kruskal-Wallis test, χ^2 , and post-hoc multiple comparisons	Significant but small age-related differences were found for selected professional roles in current and expected future assessments	Supported for selected professional roles
<i>H2</i>	Cochran's Q test, Kendall's W, and planned McNemar comparisons with Bonferroni correction	Information retrieval and learning new skills were significantly more frequent than the remaining motives	Supported
<i>H3</i>	Pearson's chi-square test with Cramer's V	Younger respondents used ChatGPT for learning new skills more frequently than older respondents, with a moderate association	Supported
<i>H4</i>	Pearson's chi-square tests with Cramer's V and pairwise comparisons with Bonferroni correction	ChatGPT version differentiated selected specialized applications, especially code generation and data analysis, while routine document preparation was most clearly associated with Premium use.	Supported for selected applications

creation, and decision preparation (Al Naqbi et al., 2024; Kaczorowska-Spychalska et al., 2024; Ritala et al., 2023). It also corresponds with the view that ChatGPT creates a new context for management theories by changing how individuals acquire, process, and apply knowledge in educational and professional settings (Korzyński et al., 2023). The contribution of the present study lies in showing this process among working students, a group positioned between higher education and professional practice.

The dominance of information retrieval and learning new skills as motives for using ChatGPT indicates that respondents primarily use the tool for knowledge access and competence development. This finding is consistent with research showing that users often turn to ChatGPT for information search, explanation, learning support, and productivity-oriented tasks (Skjuve et al., 2024; Zhou & Li, 2024). It also aligns with technology acceptance research, according to which perceived usefulness is central to technology adoption (Davis, 1989; Venkatesh et al., 2003). In the context of working students, however, this result has a more specific meaning. These users do not evaluate ChatGPT only as students engaged in academic learning, nor only as employees performing work tasks. They assess the tool from a hybrid position, in which learning, employability, and professional usefulness overlap. This extends previous research on generative AI in higher education, where students are often analyzed mainly as learners (Kanont et al., 2024; Şimşek et al., 2025), and connects it with studies on work-integrated learning and employability (Curto-Reverte et al., 2025; Jackson, 2016; Jackson & Rowe, 2022).

The age-related results are more nuanced than a simple generational interpretation would suggest. However, these findings should be interpreted cautiously because the age groups were not evenly distributed, with a strong dominance of respondents aged 20-29 and a small number of respondents in the oldest age group. In addition, the effect sizes for age-related differences in professional-role assessments were small, which suggests that these results should be interpreted as role-specific tendencies rather than significant age-based differences. Younger respondents used ChatGPT to learn new skills more frequently, which is consistent with studies indicating that younger users and students tend to show stronger openness toward generative AI in learning environments (Chan & Lee, 2023; Kanont et al., 2024). This also corresponds with recent discussions on the emerging generative AI digital divide, where age, education, socio-economic status, and AI literacy influence access, confidence, and patterns of use (Suárez & García-Mariño, 2025). However, the present study also shows that respondents aged 40-50 assigned higher assessments to ChatGPT in selected professional roles, especially customer relations specialist and secretary. This suggests that age does not operate only as a barrier to AI acceptance. In selected task contexts, older working students may evaluate ChatGPT more positively because they can relate its functions to concrete professional routines, communication tasks, and administrative work.

This finding refines previous claims about younger users being more receptive to generative AI. The results indicate that younger respondents may be more likely to use ChatGPT for self-directed learn-

ing, while older respondents may recognize its usefulness in selected practical roles. Such a distinction is important for knowledge and performance management because it shifts the interpretation from age as a simple predictor of AI acceptance toward age as a factor interacting with task context, professional experience, and perceived usefulness. Similar conclusions can be drawn from studies emphasizing that the adoption of generative AI is shaped by AI literacy, perceived usefulness, trust, and user context rather than by demographic characteristics alone (Al-Abdullatif, 2024; Pang et al., 2024; Sallam et al., 2024).

The results concerning the use of ChatGPT for learning new skills further support the interpretation of ChatGPT as a tool for competence development. The association between age group and the use of ChatGPT for learning new skills was stronger than the age-related differences in professional-role assessments, as indicated by Cramer's $V = 0.318$. The high share of younger respondents using ChatGPT for this purpose reflects the role of generative AI in individualized and flexible learning. This finding is consistent with research showing that generative AI can support personalized learning, learning motivation, and digital competence development in higher education (Kanont et al., 2024; Şimşek et al., 2025; Zhai, 2024). At the same time, the decline in learning-oriented use among older respondents indicates the need for age-sensitive AI literacy development. The literature increasingly emphasizes that effective GenAI integration requires practical, context-sensitive, and ethically grounded training rather than merely providing access to tools (Nguyen, 2025). For working students, such training should address both academic and work-related uses of ChatGPT, including prompt formulation, critical assessment of generated content, and responsible application in professional tasks.

Differences associated with the most commonly used version of ChatGPT show that tool functionality is linked to the scope of professional applications. The effect sizes indicate that these differences were most visible for specialized uses, especially generating programming code and support in data analysis, whereas information retrieval and assistance in learning new skills were not differentiated by ChatGPT version. This suggests that general knowledge-support

motives are common across users, while more specialized applications are more strongly associated with access to Premium or Other versions. This result can be interpreted through the lens of perceived usefulness and task-technology fit. More advanced versions may offer functionalities that better match complex or specialized tasks, while basic access remains sufficient for general information and learning purposes. This interpretation is consistent with studies showing that generative AI affordances, such as automation, personalization, rapid ideation, and content generation, can enhance productivity and task performance when they fit the user's task environment (Retkowsky et al., 2024; Tang et al., 2026).

However, this result should not be interpreted as evidence that the version of the tool alone determines professional use. It is also possible that respondents who already have more advanced needs, stronger digital competencies, or more specialized work tasks are more likely to use paid or extended versions of ChatGPT. This is consistent with the broader literature on technology acceptance, which suggests that adoption depends on perceived usefulness, facilitating conditions, available functionality, and user competence (Davis, 1989; Venkatesh et al., 2003). It also corresponds with studies showing that professional use of generative AI requires not only access to technology but also domain knowledge, AI literacy, and the ability to evaluate outputs critically (Budhwar et al., 2023).

The high Cronbach's alpha obtained for the role-assessment scale may indicate very high internal consistency, but it may also reflect a broader positive attitude toward ChatGPT across different professional roles. This is important because respondents who generally perceive ChatGPT positively may tend to assign higher usefulness ratings across several roles, even if these roles differ in task structure and professional requirements. Future research should therefore examine whether assessments of ChatGPT's usefulness form distinct role-specific dimensions or rather represent a more general attitude toward generative AI as a professional support tool.

The findings have several implications for knowledge and performance management. First, ChatGPT should be understood as a tool that supports individual knowledge work, especially information retrieval, learning, and selected profes-

sional tasks. Second, AI training should not be designed only around age categories. Younger users may need support in critical assessment and responsible use, while older users may benefit from task-specific demonstrations showing how generative AI can support concrete professional routines. Third, the differences between Free, Premium, and Other-version users suggest that organizations and educational institutions should distinguish between general AI literacy and advanced task-oriented use. Basic access may support learning and information search, but more specialized applications require stronger competencies, clearer procedures, and appropriate governance.

Overall, the study contributes to the literature by connecting three research streams that are often discussed separately: generative AI as a knowledge-support tool, technology acceptance and AI literacy, and working students' employability at the education-work interface. The results show that working students are not merely early adopters of digital tools, nor only future employees. They are current users who evaluate ChatGPT through both academic and professional experience. This hybrid position makes their perceptions useful for understanding how generative AI enters knowledge work before it becomes fully formalized in organizational procedures.

The study has several limitations. It used a cross-sectional survey design and relied on self-reported declarations, which means that it measured

perceived usefulness and declared motives rather than actual behavior. The sample consisted of working students in Poland, which limits the generalizability of the findings to other national, institutional, and occupational contexts. The study included information on respondents' sector of recent professional activity, but it did not include detailed measures of employment type, job position, workload, length of work experience, or the specific nature of respondents' work. As a result, working-student status was used mainly as an inclusion criterion, which limits the possibility of explaining differences in ChatGPT use through more detailed occupational characteristics. The study also focused on selected professional roles and selected motives for use, so it does not capture the full range of possible ChatGPT applications. Another limitation concerns the sample's unbalanced age structure. Respondents aged 20-29 were strongly overrepresented, whereas the oldest age group was small. This limits the statistical power of age-group comparisons and requires caution when generalizing age-related findings.

Future research should use longitudinal and qualitative designs to examine how working students' actual use of ChatGPT develops over time. Further studies should also compare different educational and professional contexts, include more detailed measures of work experience and AI literacy, and examine how the use of generative AI affects professional identity, employability, and knowledge work practices.

CONCLUSION

This study examined ChatGPT as a knowledge-support tool from the perspective of working students, a group combining higher education with professional activity. The findings indicate that respondents perceive ChatGPT mainly as a tool for accessing information and developing skills, rather than as a substitute for complete professional roles. Information retrieval and learning new skills were the two most frequently reported motives for using the tool, which confirms the supportive and competence-oriented character of ChatGPT use in this group.

The findings also show that age differentiates selected aspects of ChatGPT perception and use. Respondents aged 40-50 assigned higher assessments to ChatGPT in selected professional roles, especially customer relations specialist and secretary, while younger respondents used ChatGPT for learning new skills more frequently. This suggests that age-related differences should not be interpreted only as a general difference in openness to AI. They also depend on the task context and on how users connect ChatGPT with their educational and professional experience.

The version of ChatGPT used most often also differentiated selected professional applications. Users of Premium and Other versions more frequently reported selected specialized uses, especially code generation and data analysis, while routine document preparation was most clearly associated with Premium use. By contrast, information retrieval and learning new skills were common across tool versions. This indicates that basic access to ChatGPT may be sufficient for general knowledge-support activities, whereas more advanced or specialized applications are associated with broader functionality and higher task-specific competence.

The study contributes to the literature by showing that working students constitute a relevant group for studying generative AI use because they evaluate ChatGPT through both academic and professional experience.

The results have practical implications for higher education institutions and organizations. Universities should support students not only in accessing generative AI tools but also in developing responsible and task-oriented AI literacy, including prompt formulation, verification of generated content, and ethical use. Organizations, in turn, should distinguish between general AI literacy and advanced professional use. Training programs should be adjusted to users' task contexts and experience levels rather than designed only around broad demographic categories.

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INSTITUTIONAL REVIEW BOARD STATEMENT

This study received approval for implementation from the Scientific Research Ethics Committee of the University of Warmia and Mazury in Olsztyn (decision no. 8/2024).

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

In preparing this manuscript, the authors used ChatGPT for language editing and improvement of academic clarity. After using the tool, the authors reviewed, edited, and approved the final text and take full responsibility for the content of the publication.

AUTHOR CONTRIBUTIONS

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Writing – review and editing: Marian Oliński.

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APPENDIX A

Questionnaire items and coding scheme used in the present study

1. Have you ever used ChatGPT?

- ☐ Yes.
- ☐ No.

2. Did you work or conduct professional activity during the last 12 months?

- ☐ Yes.
- ☐ No.

3. Please indicate the sector of your recent professional activity.

- ☐ Information and communication technology (ICT).
- ☐ Finance and insurance.
- ☐ Healthcare and social care.
- ☐ Education and science.
- ☐ Energy and natural resources.
- ☐ Industrial manufacturing.
- ☐ Construction and real estate.
- ☐ Trade and distribution.
- ☐ Transport and logistics.
- ☐ Tourism and entertainment.
- ☐ Media and communication.
- ☐ Professional services and consulting.
- ☐ Agriculture and forestry.
- ☐ Charity and public benefit activities.
- ☐ Food services.
- ☐ Public administration.
- ☐ Other (please specify). _____

4. For what purposes do you use ChatGPT?
(multiple options possible)

- ☐ Information retrieval.
- ☐ Assistance in learning new skills.
- ☐ Assistance in writing essays, reports, etc.
- ☐ Support in data analysis.
- ☐ Assistance in writing routine documents.
- ☐ Generating programming code.
- ☐ Other purposes (please specify). _____

5. For each role below, please rate how useful ChatGPT is in professional contexts now and how useful it will be, in your opinion, in the near future (2–3 years).

(Use the scale: 0 – No knowledge in this area; 1 – Definitely not useful; 2 – Neither useful nor not useful; 3 – Rather useful; 4 – Definitely useful)

Role	Characteristics	Current usefulness	Expected future usefulness
Customer relations specialist	Supporting communication with customers, preparing responses to inquiries, handling simple complaints, and assisting in customer service processes		
Secretary	Supporting routine administrative tasks, preparing correspondence, organizing documents, scheduling meetings, and assisting in office communication		
SEO copywriter	Preparing search engine optimized texts, suggesting keywords, creating meta descriptions, and adapting content to online visibility requirements		
Content writer	Creating articles, posts, descriptions, and other written content for websites, social media, marketing, or internal communication		
Manager	Supporting planning, organizing tasks, preparing summaries, structuring information, and assisting in decision-related processes		
Data analyst	Supporting data organization, interpretation, summary preparation, simple reporting, and identification of patterns in data		

Which version of ChatGPT have you mainly been using?

- ☐ Free (public version).
☐ Premium (paid version).
☐ Other (please specify). _____

6. Please enter your age.

- ☐ Under 20 years old.
☐ 20-29 years old.
☐ 30-39 years old.
☐ 40-50 years old.
☐ Over 50 years old.