Online-Journals.org

iJAC International Journal of Advanced Corporate Learning

iJAC | eISSN: 1867-5565 | Vol. 18 No. 4 (2025) | OPEN ACCESS

https://doi.org/10.3991/ijac.v18i4.56123

PAPER

Beyond Automation: Understanding AI Adoption, Perception, and Ethics Among Management Students in Silesia – Poland

Luis Ochoa Siguencia (✉)

Jerzy Kukuczka Academy of Physical Education in Katowice, Katowice, Poland

l.ochoa@awf.katowice.pl

ABSTRACT

This study explores integrating artificial intelligence (AI) tools in academic workflows among management faculty at universities in Poland's Silesia region. Using a mixed-methods approach—combining quantitative surveys (n = 352) and qualitative interviews (n = 15)—the research examines how demographic factors such as age, academic rank, and prior technical experience influence the adoption, perceived benefits, and ethical concerns surrounding AI in scholarly work. Findings reveal substantial demographic disparities in AI usage. While 68% of participants report using AI tools for academic tasks, adoption is higher among younger (74% for ages 18–22) and male faculty (75.7%) compared to older (58% for ages 23–28) and female faculty (60.7%). Higher academic rank and technical proficiency also correlate with more advanced use of AI in research. Master's-level faculty perceive more significant benefits from AI ($\beta = 0.31$, $p < 0.01$) than Bachelor's-level peers. Concerns persist despite these benefits, such as improved efficiency in literature synthesis, data analysis, and manuscript preparation. Many respondents express ethical apprehensions regarding intellectual integrity, data privacy, and algorithmic bias. These are especially of concern to female academics and those utilizing qualitative methods. Institutional support is the most significant motivator of using AI responsibly. Participants cite the lack of ethical guidance, training, and policy within discipline fields as the hindrances. The study calls for explicit citation standards, targeted AI literacy programs, and comprehensive institutional frameworks to ensure the responsible integration of AI in academic settings. Three main hypotheses guide this research: younger students are more likely to use AI tools, master's-level students perceive higher utility in AI, and better institutional support predicts more responsible AI use. These hypotheses are tested quantitatively and further illuminated through qualitative data, contributing to academic theory and practical policy-making for post-industrial regions like Silesia.

KEYWORDS

AI tools in academia, demographic disparities, ethical concerns in AI, management research, Silesia region

Ochoa Siguencia, L. (2025). Beyond Automation: Understanding AI Adoption, Perception, and Ethics Among Management Students in Silesia – Poland. *International Journal of Advanced Corporate Learning (iJAC)*, 18(4), pp. 18–28. https://doi.org/10.3991/ijac.v18i4.56123

Article submitted 2025-04-22. Revision uploaded 2025-06-03. Final acceptance 2025-06-24.

1 INTRODUCTION

The diffusion of artificial intelligence (AI) technologies is reshaping the research environment in academia, with unmatched opportunities for automation, data exploration, and knowledge generation in all fields of inquiry [1], [2], [3], [4]. In management research, AI technologies—from generative language models like ChatGPT to advanced data analytics platforms—are increasingly embedded in workflows, promising to enhance research efficiency, facilitate literature synthesis, and support decision-making [5]. Yet, their adoption and effects are neither homogeneous nor problem-free, with considerable diversification evident among demographic groups, institutional environments, and local scholarly cultures..

In the Silesia region of Poland, a historically industrial area undergoing rapid transformation toward a knowledge-based economy, universities serve as critical innovation and skills development nodes. But the embedding of AI in management scholarship here is contingent on a coming together of factors: generational differences in digital literacy, institutional differences, and deeply ingrained cultural attitudes towards technology and intellectual convention. The literature has demonstrated that academic status, age, and technical discipline prior to research significantly impact take-up and perceived usefulness of AI tools in academic work [6].

The ethical consequences of the use of AI in higher learning have been at the forefront of current debate. Concerns about data privacy, algorithmic bias, and the erosion of critical scholarly skills are particularly acute in management research, where decision-making stakes extend to business practice and public policy [7], [8]. In addition, the lack of clear institutional guidelines and discipline-specific guidelines for ethical use of AI contributes to faculty uncertainty, giving rise to issues of authorship, intellectual integrity, and the future of academic labor [6].

This study addresses these gaps by systematically investigating how demographic factors—specifically age, academic rank, and prior technical experience—influence the adoption, perception, and ethical concerns surrounding AI tools among management faculty in Silesia. Integrating quantitative survey data with qualitative interviews, the study seeks to trace patterns of use, reveal socio-cultural stories behind resistance or enthusiasm, and identify institutional obstacles to responsible AI integration. In doing so, it engages wider theoretical debates regarding the digital transformation of the academy and offers actionable insights for policy and practice for fields experiencing similar transformations.

The research questions informing this study are:

1. What demographic factors forecast AI tool usage and perceived usefulness in management research?
2. What unique ethical dilemmas arise from AI-augmented scholarship in this context?
3. How do institutional and cultural factors in Silesia mediate faculty perceptions and practices regarding AI in academia?

By situating the study at the intersection of technology, ethics, and regional transformation, this research advances understanding of the complex dynamics shaping AI adoption in management research. It informs the development of context-sensitive strategies for equitable and responsible innovation.

2 LITERATURE REVIEW

Implementation of Artificial Intelligence (AI) technology in research activities has been part of academic scholarship, embracing its potential to revolutionize and pose potential hazards [9]. Current research lays out AI capacity to enhance the productivity of research, especially across data-intensive field research, to synthesize literature, statistical tests, and predictive modelling [6]. Tools like ChatGPT and Grammarly are now widely adopted for drafting and editing scholarly texts, with evidence suggesting they reduce time spent on routine tasks while improving output quality [10], [11]. However, adoption patterns remain uneven, particularly in management studies, where researchers often lack the technical expertise to leverage advanced AI applications beyond basic language generation [12]. This gap underscores the need for targeted training programs to bridge technical literacy divides and ensure equitable access to AI's benefits [13], [14].

In management scholarship, the role of AI is especially complicated since the field has a dual focus on quantitative rigor and qualitative interpretation. Researchers have started using generative AI for scenario simulation and analysis of big data, allowing new theoretical strategies that combine computational techniques with conventional case-study methods [12]. Methodological authenticity remains a problem, though, since over-reliance on automated processes undermines the critical thinking at the heart of rigorous management scholarship [7]. Ethical concerns are increased in such a situation, given the direct impact of management research on business practice and policymaking. Issues of algorithmic bias, data privacy, and intellectual ownership demand discipline-specific ethical frameworks that balance innovation with accountability [8].

Ethical considerations surrounding AI in academia have generated extensive debate, particularly regarding plagiarism, authorship attribution, and the erosion of researcher autonomy. Recent experimental research validates that regulatory environments contribute substantially to anxieties regarding AI risks, with scholars demystifying increased bias and transparency problems once they are informed of governance models. This validates how institutional policies significantly influence the adoption of responsible AI. However, current guidelines often lack specificity for management research contexts, failing to address unique challenges such as the ethical implications of AI-generated business forecasts or automated stakeholder analyses [15].

Training and institutional support emerge as recurring themes in the literature, with scholars advocating for AI literacy programs integrated into graduate curricula and professional development initiatives [16]. Such efforts must address technical skills and the philosophical implications of AI-driven research, fostering reflexive practices that question how tools shape research questions and interpretations [12], [17]. This is particularly urgent for regions like Silesia, where post-industrial transitions demand innovative research approaches while legacy academic traditions may resist technological disruption. Regional studies highlight how local factors—including resource availability, institutional cultures, and demographic composition—mediate AI adoption patterns, necessitating context-sensitive strategies [18].

The synthesis of existing scholarship reveals a critical gap in understanding how demographic variables—such as age, academic rank, and disciplinary specialization—interact with institutional and cultural factors to shape AI adoption in management research. While global trends emphasize AI's potential to democratize research capabilities, regional disparities in technological infrastructure and ethical priorities

suggest that universal frameworks may prove inadequate [19]. This literature review thus sets the stage for an examination of how Silesia's distinctive academic environment manages the promise and risk of AI integration, with policy salience to the region and larger theoretical claims about technology's role in scholarship.

3 MATERIALS AND METHODS

This study employed a mixed-methods design to investigate demographic differences in AI tool adoption among Bachelor's and Master's students enrolled in management programs at the Silesia region Faculties of Management, focusing on gender, study level, and age. The research design combines quantitative survey information and qualitative interviews to examine usage patterns, ethical dispositions, and institution-level variables, responding to international trends in business education while being sensitive to localities of difference common among Central European management schools.

The quantitative component utilized a stratified sampling approach to ensure representation across academic levels, yielding a final sample of 352 students (Bachelor's: $n_{\text{Bachelor's}} = 243$; Master's: $n_{\text{Master's}} = 109$). Gender distribution comprised 186 women (46.6%), 164 men (52.8%), and two participants who preferred not to disclose (0.6%), with a mean age of 22.4 years ($\mu = 22.4$, $\sigma = 1.61$). The survey instrument, adapted from validated scales in technology adoption research, measured variables such as AI tool frequency (x_{usage}), perceived utility (x_{utility}), and ethical concern severity (x_{ethics}) using Likert-type items. Construct reliability was assessed via Cronbach's alpha (α), calculated as:

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\Sigma_{i-1}^{k}\sigma_i^2}{\sigma_{total}^2}\right)$$

where k represents the number of items, σ_i^2 the variance of item i, and σ_{total}^2 the total variance. All constructs achieved $\alpha > 0.7$, meeting reliability thresholds.

Demographic predictors were analyzed using multiple linear regression:

$$y = \beta 0 + \beta 1(gender) + \beta 2(study\ level) + \beta 3(age) + \varepsilon$$

Where y represents dependent variables (e.g., AI usage frequency), $\beta 0$ is the intercept, $\beta 1$–3 are the coefficients, and ε is the error term. ANOVA compared means between Bachelor's and Master's cohorts, with the F-statistic calculated as:

$$F = \frac{\text{Between} - \text{group variability}}{\text{Within} - \text{group variability}}$$

Qualitative data were gathered via semi-structured interviews of 15 purposively sampled students with varying genders, study levels, and use patterns of AI tools. Interviews explored institutional support, ethical dilemmas, and disciplinary-specific challenges in AI adoption. Transcripts were analyzed thematically, with code salience computed as f_c/N (where fc = code frequency, $N = 15$ interviews). Intercoder reliability, assessed via Cohen's kappa (κ), achieved $\kappa > 0.8$ for all codes, ensuring consistency.

Ethical procedures followed institutional guidelines, with emphasis on informed consent, data anonymization, and participant choice. Rigor in methods ensured by

pilot testing, data source triangulation, and member checking. While the sample's geographic focus (Silesia region) limits generalizability, the design aligns with global studies of AI adoption in business education, such as those examining gender and ethnic diversity in some MBA programs [20], [21].

4 RESULTS

This mixed-methods investigation captures the complex dynamics of demographic, institutional, and ethical forces of AI tool adoption by management students at a Polish Silesia university. Combining quantitative survey results (n = 352) with qualitative interviews (n = 15), the results identify complex patterns of AI uptake, beliefs, and issues intertwined in global technology integration debates in tertiary education.

4.1 Quantitative analysis

Most participants (68%) reported using AI tools for school assignments, with wide gaps across demographic groups:

- Male students' adoption levels were higher (75.7%) than those of their female counterparts (60.7%), which was a gap compounded by the adoption of paid subscription (23.3% and 10.7%). This conforms to international studies reporting systemic constraints to women accessing advanced technologies, with technology being one of the major areas.
- Master's students demonstrated more significant AI tool usage (81%) than Bachelor's students (62%), particularly for data analysis ($\chi^2 = 12.4$, $p < 0.01$). Advanced academic stages correlated with exposure to AI-driven methodologies in coursework, such as predictive modelling and natural language processing.
- Younger students (18–22 years) reported higher AI usage (74%) than older peers (23–28 years: 58%), reflecting generational divides in technological literacy ($F = 8.2$, $p < 0.05$).

These demographic trends are summarized in Table 1.

Table 1. Demographic differences in AI tool usage among students

Demographic Variable	AI Usage (%)	Statistical Test	Significance (p-Value)
Gender (Male)	75.7%	Chi-square ($\chi^2 = 10.9$)	$p < 0.01$
Gender (Female)	60.7%		
Academic Level (Master's)	81.0%	Chi-square ($\chi^2 = 12.4$)	$p < 0.01$
Academic Level (Bachelor's)	62.0%		
Age (18–22)	74.0%	ANOVA ($F = 8.2$)	$p < 0.05$
Age (23–28)	58.0%		

Regression analysis (R^2 = 0.43) identified key predictors of perceived AI tool utility among students. The model, expressed as Perceived Utility = 2.34 + 0.18(Age) – 0.25(Gender) + 0.31(Academic Level) + ε, indicates that, all other variables being constant, older students and those at a higher academic level (Master's) tend to perceive AI tools as more useful (positive coefficients). In contrast, male students rated AI tools higher than female students. The complete regression model is presented in Table 2.

Table 2. Multiple linear regression model predicting perceived utility of AI tools

Predictor Variable	Unstandardized Coefficient (β)	Significance (*p*-Value)
Age	+0.18	$p < 0.05$
Gender (Male = 1, Female = 0)	–0.25	$p < 0.01$
Academic Level (Master's = 1)	+0.31	$p < 0.01$
R^2 (Model Fit)	0.43	

In contrast, male students rate AI tools higher than female students. This aligns with the broader quantitative trend indicating that Male and Master's students rated AI tools more beneficial. At the same time, ethical concerns—that is, data privacy and bias—were higher among women (β = –0.32, p < 0.01) and qualitative research students. These results are in line with cross-national studies that reveal gendered ethical sensitivity in the use of technology. Qualitative results give insightful information regarding the root of these varied attitudes and suggest that a dependence on information based on AI may be at the cost of the critical thinking of the students.

4.2 Qualitative insights

Thematic analysis of interviews revealed four dominant narratives:

- Auxiliary Tool Integration: Students emphasized using AI for idea generation and information synthesis, often refining outputs through critical analysis. One participant noted, *"I use ChatGPT to draft outlines, but I always restructure arguments to reflect my voice."* However, some acknowledged dependency risks, such as diminished independent problem-solving.
- Ethics Tensions: Academic honesty issues were top priority, particularly the danger of AI-generated work being substituted for original thought. A Master's student said, *"If everyone uses AI to write essays, how do we assess true competency?"* Participants advocated explicit citation guidelines and plagiarism detection tools tailored to AI-generated text.
- Institutional Gaps: Students cited insufficient guidance on AI ethics, with one stating, *"Our professors rarely discuss how to use AI responsibly—we are left to figure it out ourselves."* Recommendations included workshops on AI literacy and discipline-specific best practices.
- Learning Outcomes: While AI improved research efficiency, some students reported superficial engagement with the material. A Bachelor's student explained, *"AI summarizes articles quickly, but I sometimes miss deeper insights I would gain from reading fully."*

4.3 Integrated analysis

Table 3 synthesizes the key quantitative findings with supporting qualitative insights, offering a holistic view of how demographic variables influence AI adoption patterns and perceptions.

Table 3. Integrated Analysis of Quantitative Trends and Qualitative Narratives on AI Tool Use

Quantitative Trend	Supporting Qualitative Insight	Illustrative Quote
Higher AI usage among Master's students (81%)	Advanced academic stages require more exposure to AI in research tasks.	"Advanced courses require data analysis tools like Python, which undergrads rarely learn."
Gender gap in AI usage and subscriptions (Male 75.7% vs Female 60.7%)	Male students often link AI use to career advancement; female students express more ethical concerns.	"Men prioritize AI skills for career advancement; women worry about reinforcing biases."
Younger students (18–22) use AI more (74%) than older (23–28) students (58%)	Younger students are more comfortable with digital tools; older ones are skeptical of AI's transparency.	"Older students distrust AI's 'black-box' nature, preferring traditional methods."
Female students report stronger ethical concerns ($\beta = -0.32$, $p < 0.01$)	Ethical awareness is heightened among women and qualitative researchers.	"If everyone uses AI to write essays, how do we assess true competency?"
Perceived utility is higher among Master's students ($\beta = 0.31$, $p < 0.01$)	Students at higher academic levels recognize AI's benefits in research-intensive tasks.	"I use ChatGPT to draft outlines, but I always restructure arguments to reflect my voice."
Lack of institutional guidance cited across groups	Students report inadequate training or discussion around ethical AI use.	"Our professors rarely discuss how to use AI responsibly—we are left to figure it out ourselves."

This study illustrates that while AI tools improve research effectiveness and methodological creativity, their use is determined by population factors, ethical issues, and organizational support systems. The results validate international concerns regarding fair access to technology and intellectual integrity and highlight region-specific issues, such as dispersed training environments and outdated industrial thinking. This study places statistical trends in their qualitative contextual story and offers pragmatic suggestions for promoting responsible AI adoption in management education.

This mixed-methods study illuminates the complex dynamics of embracing AI among management students. The results indicate the need to take demographic variables, ethical issues, and the effect of AI on the learning outcome into consideration. In response to these challenges, policymakers and educators can prepare students to enter the future job market in the AI era.

4.4 Key findings

Integrating AI tools into the daily routine of management students is challenging and rewarding, as highlighted in this study's reading of survey data and key interviews. Among the common themes that arise from the qualitative data is students' views of AI as a supporting tool. They use it mainly for data collection,

generation of ideas, and work planning. They agree to read through, analyze, and revise AI-generated content based on their experience and critical thinking. This is a cautious strategy that shows awareness of the potential of AI to enhance and constrain independent thought and the necessity for a balanced and well-informed strategy of use.

AI's ability to challenge existing assumptions and push research frontiers has been another significant discovery. Students pointed out instances of AI's presentation of fact-based observations, alternative explanations, and new vocabulary, opening up new areas of study and greater insight into complex subject matter. Such a provision of diverse perspectives on subjects reflects AI's capacity to challenge personal thinking and intellectual curiosity. Nonetheless, students also reported concerns regarding ethical use of AI, i.e., plagiarism, overdependence, and the possibility of AI output as a substitute for actual thinking and academic honesty. All these concerns highlight the necessity of a robust ethical framework and guidelines for the responsible use of AI in educational environments.

The research also found an imbalance between institutional direction and supervision of AI ethics and best practices. The majority of students reported that they were not being offered adequate direction from their institutions in terms of how to deal with the ethical aspects of AI adoption, prompting good policy, workshops, and guidelines to use AI responsibly. This indicates how much of a role educational institutions ought to play in giving students education and competence on how to use AI resources responsibly and ethically. In this regard, students suggested that AI could be further integrated by serving as a supplementary tool for organization, research, and idea generation, while leaving critical analysis and creativity to the students and allowing them personalized feedback and guidance through complex concepts.

In addition, students quoted AI ability to enhance time management, enable collaboration, and adjust learning experiences. Nevertheless, they acknowledged the limits of AI where deep sole-based analysis is needed and where it could cause dependence and suppress critical thinking abilities. To avoid or reduce such risks, students stressed using AI as an aid, triggering sole-based learning, and setting stringent ethical requirements.

In summary, the general results of the study emphasize the extensive and complex nature of AI tool integration in the lives of management students. While there are a number of strengths of AI in the forms of efficiency, availability of information, and expansion of vision, its weaknesses would arise from notions like ethics, critical thinking, and organizational backing. These will have to be overcome by intelligence and well-considered balance planning, mature ethical foundation, institutional anchor point, and a serious strategic pledge towards developing abilities of self-learning and critical thinking. With such a basis laid, AI can be a great tool for enhancing the learning process and preparing learners for the workplace.

5 DISCUSSION

This research analyzed the integration of AI tools into management students' pedagogical practice in Silesia, Poland, and the influence that demographic, institutional, and ethical factors have on their adoption and attitude. Through a mixed-methods approach, the research identified clear patterns of AI usage and revealed how students navigate the balance between technological efficiency and academic integrity.

The results are consistent with the finding that AI tools are popular, utilized primarily by young, male, and master's-level students. The results also show, however, that students utilize the tools more as supplements to, and not as replacements for, creative thinking. Some embraced the utility of AI in supporting research, idea generation, and work organization, and were also careful about its limitations, specifically the risk of overuse and reduced critical thinking.

One of the constant themes across the interviews was the need for critical thinking. Students indicated that though AI improves efficiency, it diminishes the deeper understanding aspect if used naively. This indicates the need to learn techniques that develop analytical and reflective capacity as well as technical competence.

Ethical issues were always on the agenda, such as plagiarism, blurring of authorship, and algorithmic bias. These were of greatest significance to women students and qualitative researchers, in line with international research that had associated demographic factors with ethical sensitivity to the use of technology.

Institutional support was also a strong mediating factor. Many students lacked faculty guidance in the ethical use of AI, showing the requirement of open policies, AI literacy instruction, and departmental guidelines. Offering such tools to both students and faculty is required in order to align the use of AI with academic quality. Finally, this study views AI adoption as a technical decision and an ethical and educational problem. Educating students to work in the future involves creating digital competence and the cognitive capabilities that are uniquely human—reflective judgment, imagination, and ethical thinking.

6 CONCLUSION

This research broadly describes how management students in Poland's Silesia region manage to incorporate artificial intelligence (AI) tools into their studies. Grounded in a mixed-methods approach, the research addressed three central questions: how demographic variables influence AI adoption and perceived utility; what ethical dilemmas emerge from AI-augmented scholarship; and how institutional and cultural factors mediate students' experiences with these technologies. The data supported the hypotheses derived from these questions, demonstrating clear demographic trends in usage, perception and gaps in institutional support.

Quantitative results showed that Master's-level, younger, and female students prefer to employ more AI tools and find them useful for enhancing task effectiveness in terms of data analysis, synthesis of literature, and content organization. Regression analysis substantiated that age and academic level were the optimal predictors of perceived usefulness of AI, and gender was the predictor of usage levels as well as ethical issues. These quantitative patterns were supplemented by qualitative data illuminating the socio-cultural narratives behind students' choices and issues.

One of the emerging trends throughout the dataset is that students do not see AI as a substitute for critical thinking or independent study but as an enhancement of human interpretation and academic integrity. However, the research also poses significant ethical concerns, specifically over plagiarism, bias, and undermining scholarly judgment, more strongly believed by female students and those who finish qualitative methodologies.

Equally significant, the research highlights an urgent institutional shortcoming: the absence of distinct, discipline-focused policy regarding the ethical use of AI. Students repeatedly grumbled about being left to fend for themselves on ethics issues, so universities need to employ AI literacy courses, develop open citation policies, and include AI ethics in curriculum planning.

In conclusion, integrating AI into management education must be strategic and reflective. Educational institutions have a dual responsibility: to equip students with the technical competencies required in a digitized world and to cultivate the human-centered skills—critical thinking, creativity, systems thinking, and ethical reasoning—that machines cannot replicate. This research adds to the growing body of literature on AI in higher education by providing a rich, evidence-based understanding of how demographic, institutional, and ethical considerations come together to shape student use of AI. With the nature of academic and professional environments still evolving, these results provide a starting point for shaping policy and practice to ensure that AI is being used for productivity and the advancement of reflective, responsible scholarship.

7 REFERENCES

[1] B. Divjak, B. Svetec, D. Horvat, and N. Kadoić, "Assessment validity and learning analytics as prerequisites for ensuring student-centered learning design," *British Journal of Educational Technology*, vol. 54, no. 1, pp. 89–107, 2022. https://doi.org/10.1111/bjet.13290

[2] O. Ali, P. A. Murray, M. Momin, Y. K. Dwivedi, and T. Malik, "The effects of artificial intelligence applications in educational settings: Challenges and strategies," *Technological Forecasting and Social Change*, vol. 199, p. 123076, 2024. https://doi.org/10.1016/j.techfore.2023.123076

[3] G.-J. Hwang, L.-Y. Chiu, and H. Xie, "Trends in artificial intelligence and smart learning environments research: A bibliometric review and visualization," *Computers and Education: Artificial Intelligence*, vol. 4, p. 100089, 2023. https://doi.org/10.1016/j.caeai.2023.100089

[4] V. I. Marín, M. Bond, and F. Gouverneur, "Systematic review of research on artificial intelligence applications in higher education – where are the educators?" *International Journal of Educational Technology in Higher Education*, vol. 16, no. 1, pp. 1–27, 2019. https://doi.org/10.1186/s41239-019-0171-0

[5] M. Bobula, "Generative artificial intelligence (AI) in higher education: A comprehensive review of challenges, opportunities, and implications," *Journal of Learning Development in Higher Education*, no. 30, 2024. https://doi.org/10.47408/jldhe.vi30.1137

[6] M. Bond *et al.*, "A meta-systematic review of artificial intelligence in higher education: A call for increased ethics, collaboration, and rigor," *International Journal of Educational Technology in Higher Education*, vol. 21, no. 1, pp. 1–41, 2024. https://doi.org/10.1186/s41239-023-00436-z

[7] R. Krzysztofik, A. Zagórowska, I. K. Kantor-Pietraga, D. Malchar-Michalska, M. W. Lamparska, and A. Dudek, "The impact of regional demographics on higher education policy. An example from Silesia, Poland," *Environmental & Socio-Economic Studies*, vol. 9, no. 1, pp. 10–22, 2021. https://doi.org/10.2478/environ-2021-0002

[8] S. Barykin, A. Ivashchenko, and A. Stepanov, "Ethical challenges of artificial intelligence in academic research: Addressing bias and privacy concerns," *Journal of Business Ethics*, vol. 179, no. 3, pp. 525–541, 2021. https://doi.org/10.1007/s10551-020-04612-3

[9] A. Buhmann, S. Sørensen, and L. Frederiksen, "Navigating the ethical implications of AI in management research," *Business and Society Review*, vol. 125, no. 2, pp. 249–267, 2020. https://doi.org/10.1111/basr.12210

[10] E. Tundrea, "Artificial intelligence in higher education: Challenges and opportunities," in *INTED2020 Proceedings*, 2020, pp. 2041–2049. https://doi.org/10.21125/inted.2020.0644

[11] S. Biswas, "Role of Chatgpt in computer programming," *Mesopotamian Journal of Computer Science*, vol. 2023, pp. 9–15, 2023. https://doi.org/10.58496/MJCSC/2023/002

[12] S. Raisch and S. Krakowski, "Artificial intelligence and management: The automation–augmentation paradox," *Academy of Management Review*, vol. 46, no. 1, pp. 192–210, 2021. https://doi.org/10.5465/amr.2018.0072

[13] J. H. Kim, J. Kim, C. Kim, and S. Kim, "Do you trust ChatGPTs? Effects of the ethical and quality issues of generative AI on travel decisions," *Journal of Travel & Tourism Marketing*, vol. 40, no. 9, pp. 779–801, 2024. https://doi.org/10.1080/10548408.2023.2293006

[14] S. L. Burton and D. O'Neal, "AI-driven education, careers, and entrepreneurship for a transformed tomorrow: A case study unlocking success," *International Journal of Advanced Corporate Learning (iJAC)*, vol. 17, no. 4, pp. 4–15, 2024. https://doi.org/10.3991/ijac.v17i4.45683

[15] C. Knoblauch and R. Joost, "The potential of artificial intelligence in education: Supporting educational transformation for learners and educators," *International Journal of Advanced Corporate Learning (iJAC)*, vol. 18, no. 1, pp. 28–40, 2025. https://doi.org/10.3991/ijac.v18i1.51197

[16] D. Jeffries and B. Ahn, "Collaborative learning & collective sensemaking on generative AI & its impacts on adult learning," *International Journal of Advanced Corporate Learning (iJAC)*, vol. 17, no. 1, pp. 102–105, 2024. https://doi.org/10.3991/ijac.v17i1.39797

[17] A. Zirar, S. I. Ali, and N. Islam, "Worker and workplace Artificial Intelligence (AI) coexistence: Emerging themes and research agenda," *Technovation*, vol. 124, p. 102747, 2023. https://doi.org/10.1016/j.technovation.2023.102747

[18] S. Seufert and J. Spirgi, "Navigating AI transformation: Human resource development strategies for corporate learning," *International Journal of Advanced Corporate Learning (iJAC)*, vol. 17, no. 4, pp. 80–93, 2024. https://doi.org/10.3991/ijac.v17i4.47443

[19] B. Moya *et al.*, "Academic integrity and artificial intelligence in higher education (HE) contexts: A rapid scoping review," *Canadian Perspectives on Academic Integrity*, vol. 7, no. 3, pp. 1–19, 2024. https://doi.org/10.55016/ojs/cpai.v7i3.78123

[20] B. Michael, "International education in business context and research," *Journal of International Education in Business*, vol. 18, no. 1, pp. 1–7, 2025. https://doi.org/10.1108/JIEB-01-2025-113

[21] R. M. Yawson and V. J. Lewis, "Navigating contemporary issues in business and management," *Organization Management Journal*, vol. 22, no. 1, pp. 2–9, 2025. https://doi.org/10.1108/OMJ-03-2025-977

8 AUTHOR

Luis Ochoa Siguencia, PhD, is an Associate Professor at the Jerzy Kukuczka Academy of Physical Education in Katowice (AWF Katowice), Poland. His work focuses on digital learning innovation, ICT in education, and digital inclusion. He is the author of the CAM (Creative–Analytical–Managed) Learning Model and has published over 200 academic works, contributing to multiple Erasmus+ projects on digital transformation and lifelong learning (E-mail: l.ochoa@awf.katowice.pl).