



CHATGPT AND EMPLOYABILITY IN HIGHER EDUCATION: EXPLORING CREATIVITY, CRITICAL THINKING, AND PROBLEM-SOLVING

Cristina CALLE-MARTINEZ ¹, Marta SILVERA-ROIG ², Nuria RECUERO-VIRTO ³ ,
 Marta PAREDES-MARTINEZ ⁴

¹Department of English Studies, Faculty of Commerce and Tourism, Complutense University of Madrid, Avenida Filipinas 3, 28003 Madrid, Spain

²Department of Modern Philology, Translation and Interpreting, University of Las Palmas de Gran Canaria, Office 116 - Edificio Anexo (Humanidades), Calle Pérez del Toro, 1, 35001 Las Palmas, Spain

³Marketing Department, Faculty of Commerce and Tourism, Complutense University of Madrid, Avenida Filipinas 3, 28003 Madrid, Spain

⁴Marketing Department, Faculty of Information Sciences, Complutense University of Madrid, Avenida Complutense s/n, Ciudad Universitaria, 28040 Madrid, Spain

Article History:

- received 19 March 2025
- accepted 16 February 2026

Abstract. Generative AI tools are reshaping higher education and employability preparation. This study examines how using versus not using ChatGPT influences university students' perceptions of employability, focusing on complex problem-solving, critical thinking, and creativity. Thirty students from the Complutense University of Madrid completed a contingency-plan task and participated in eight focus groups analyzed through Grounded Theory (ATLAS.ti). Results show that ChatGPT use is associated with efficiency, output refinement, and assisted creativity, while non-use is associated with originality, deliberation, and teamwork. The findings reveal preliminary patterns in students' experiences with and without AI, warranting further quantitative investigation rather than claims of improved skills or employability.

Keywords: artificial intelligence, employability, soft skills, problem-solving, critical thinking, creativity.

 Corresponding author. E-mail: nrecuero@ucm.es

1. Introduction

The rapid rise of Artificial Intelligence (AI) in higher education is transforming learning and employability preparation (Chan & Colloton, 2024). Generative tools like ChatGPT enhance efficiency, adaptability, and creativity (Poláková et al., 2023) while reshaping assessment and engagement (Liu et al., 2025; Strzelecki, 2024).

Soft skills – complex problem-solving (CPS), critical thinking (CT), and creativity – remain essential for adaptability and collaboration (Chiu et al., 2024; Dean & East, 2019).

CPS involves adaptive decision-making (Fischer et al., 2012), CT emphasizes evidence-based reasoning (Halpern & Dunn, 2022), and creativity bridges technical and human-centered innovation. Together, they strengthen employability and prepare graduates for AI's ethical and practical challenges (Al-kfairy et al., 2024; Poláková et al., 2023).

However, few studies examine AI's impact on soft-skill development or employability. Most focus on automation rather than interpersonal or cognitive growth. As Giordano et al. (2024) note, AI's transformative potential depends on critical, informed use – otherwise, early enthusiasm may fade into disillusionment.

Employability today requires combining human and technological competences. Core skills – CPS, CT, and creativity – remain crucial for adaptability (European Commission, 2020a). ChatGPT can strengthen or weaken these skills depending on how it is used. Critically applied, it fosters reflection and creativity (Giordano et al., 2024); used passively, it may reduce originality (Çela et al., 2024). Students see it as both aid and challenge (George-Reyes et al., 2025). This exploratory and qualitative study examines how ChatGPT shapes employability perceptions by mapping the balance between automation and human creativity through CPS, CT, and creativity in higher education.

2. Material and methods

2.1. Objective and research question

As AI transforms skill demands and career trajectories, it introduces both opportunities and uncertainties (Bankins et al., 2024). When used critically, ChatGPT can strengthen motivation, autonomy, and critical thinking (Mohamed et al., 2024). Our research question is: How does the use of ChatGPT shape students' perceptions of their future employability? We examine how using ChatGPT for CPS, CT, and creativity influences students' employability perceptions by shaping their readiness and confidence for future work.

2.2. Methodology

This research employed a two-phase design to explore ChatGPT's impact on students' experiences and problem-solving skills.

1) *Contingency plan task*: Students were asked to design a contingency plan for an international tourism conference affected by a last-minute venue problem at the *Círculo de Bellas Artes* (Madrid). One group used ChatGPT for support, while the other worked independently. The task included: a) writing an 800-word contingency plan in English proposing new venues, logistics, and communication strategies; and b) developing a detailed event timeline reflecting the relocation process.

Table 1. Theoretical categories explored in focus group discussions (source: own elaboration)

Theoretical categories	Sample questions	
	ChatGPT users	Non ChatGPT users
<i>Complex problem-solving</i>	How did ChatGPT help you in resolving case problems? What were its limits?	How do you think ChatGPT might have helped you in resolving case problems? What strategies did you use instead?
<i>Critical thinking</i>	Did using ChatGPT affect your ability to evaluate different options critically?	Did completing the task without ChatGPT affect how you evaluated different options?
<i>Creativity</i>	How did ChatGPT influence your creativity when generating solutions?	How did working without ChatGPT influence your creativity when generating solutions?
<i>Employability perceptions</i>	How do you view AI tools like ChatGPT affecting future employability?	How do you think AI tools like ChatGPT could affect future employability?

2) *Focus groups*: After the task, eight online focus groups were held via Microsoft Teams to capture students' experiences. Each was led by two researchers (a moderator and an observer) to ensure consistency and a comfortable discussion environment. A standardized guide with four categories was used for both ChatGPT users and non-users. To maintain neutrality and comparability, questions were conceptually identical but adapted in wording (e.g., users: "*How did ChatGPT help you solve problems?*" vs. non-users: "*How might ChatGPT have helped you?*"). This ensured theoretical alignment and methodological rigor across sessions, facilitating the emergence of grounded categories.

2.3. Data collection

The contingency plan task took place on October 30, 2024, within an English course at the Faculty of Commerce and Tourism, Complutense University of Madrid, with 30 undergraduate participants. Data were collected between October 30 and November 13, 2024, through eight focus groups – four with ChatGPT users and four with non-users – to enable comparative analysis.

Participants were selected through purposive, non-probabilistic and theoretical sampling to capture varied experiences with AI. Participation was voluntary and continued until theoretical saturation was reached (Corbin & Strauss, 2008), ensuring rich insights from both user and non-user groups and that no new properties of the emerging categories appeared. Ethical principles followed the guidelines for qualitative research of Gibson and Brown (2009): participants were fully informed, participation was voluntary, and anonymity and confidentiality were guaranteed. Focus group sessions followed a standardized four-step procedure to ensure theoretical consistency and explore ChatGPT's impact on CPS, CT, creativity, and employability perceptions.

Each session began with moderators presenting the study's objectives and ensuring voluntary, confidential participation to foster trust. Participants were invited to share views openly in a safe and collaborative environment. The main discussion focused on four key categories:

- *Complex problem-solving*: Participants discussed how ChatGPT influenced their CPS, comparing its benefits and limitations. Those without ChatGPT reflected on challenges they faced and speculated on how the tool might have impacted their approach.
- *Critical thinking*: Participants explored whether using or not using ChatGPT affected their ability to evaluate different options critically.
- *Creativity*: The discussion included how ChatGPT influenced creativity, whether it facilitated idea generation or limited innovative thinking.
- *Employability perceptions*: Participants shared their views on the implications of using AI tools for future work, including concerns about automation and employability, as well as potential benefits.

The main moderator used open-ended questions of each category, encouraging participants to engage in the discussion. Each session ended with a summary of key ideas and an open invitation for final comments. Moderators thanked participants, highlighting the significance of their contributions to the research. Consistency across sessions was maintained through a standardized set of guidelines that balanced uniform theoretical coverage with

flexibility to reflect each group's specific experiences (Table 1). This approach ensured methodological rigor essential for the subsequent inductive building of theory.

All focus groups addressed the same categories using parallel questions to ensure consistency and minimize bias. Two external reviewers confirmed the neutrality and clarity of the question set, reinforcing methodological rigor (Corbin & Strauss, 2008). A literature review informed the design of questions and protocols, grounding the study in current research on AI in higher education. This ensured theoretical coherence while allowing flexibility to capture both individual and collective perspectives.

2.4. Data analysis technique

This study explores ChatGPT's impact on students' learning using Grounded Theory and ATLAS.ti 23.4 (Charmaz & Thornberg, 2020; Miani et al., 2023). The objective was to move beyond descriptive analysis to construct a preliminary theory that explains the social and cognitive processes of AI integration (Table 2). Grounded Theory ensured methodological coherence and allowed theoretical patterns to emerge inductively. Widely used to reveal social processes in education (Crawford et al., 2020), it guided analysis of AI integration through the constant comparative method and theoretical sampling across four stages: design, data collection, analysis, and literature comparison (Aldamman et al., 2024). Data and categories were refined iteratively until theoretical saturation was reached (Corbin & Strauss, 2008).

Table 2. Phases of qualitative research (source: own elaboration)

Grounded theory phase	Atlas.ti stage	Process description
Research design	Before using Atlas.ti	Formulation of the research problem (through literature review) and theoretical positioning.
Sample design	Theoretical non-probabilistic sampling	Developed iteratively to densify and saturate emerging categories.
Data collection	Student focus groups	Eight focus groups conducted via Microsoft Teams.
	Revision of automatic transcription	Each focus group transcription was reviewed for initial coding.
Starting the Atlas.ti project	Project creation	Primary documents (transcripts) were included as obtained.
Open coding	Textual Level	Fragmenting data into incidents and naming them with initial conceptual codes.
Axial coding	Conceptual level	Relating categories to subcategories and identifying their properties and dimensions.
Selective coding	Category refinement	Integrating and refining the theory around a core category.
Theory construction	Development of conceptual networks	Creation of an explanatory conceptual model and core category identification.
Theory Validation	Literature confrontation	Linking the emerging theory with existing literature to ensure formal coherence.

Focus group participants emphasized ChatGPT's role in enhancing productivity and speed (Table 3). Among users, this category appeared eight times, totaling 15 mentions overall (Table 4). A participant explained, *"We entered the information into ChatGPT, and it produced a complete text very quickly. We reviewed it because there are usually one or two mistakes, but we managed to finish everything in about 20 minutes"*.

Table 3. Code definitions (source: own elaboration)

Category	Code	Code definition
Problem-solving	Time efficiency	The ability to complete tasks more quickly with or without the assistance of ChatGPT, focusing on the impact of AI on speed and productivity.
	Information management	The process of accessing, organizing, validating and integrating information effectively to support decision-making, with or without ChatGPT.
	Team collaboration	The dynamics of group interaction during problem-solving, emphasizing the integration of ChatGPT as a tool to support or influence teamwork.
	Method comparison	A detailed evaluation of differences and similarities between manual problem-solving approaches and those supported by ChatGPT.
Critical thinking	Evaluation of AI suggestions	Critically assessing the relevance, quality and applicability of ChatGPT's outputs to determine their value for the task at hand.
	Alternative exploration	The process of generating and comparing multiple solutions or approaches to a problem, considering both AI-assisted and manual methods.
	Ethical reasoning	Examining the ethical dimensions of using AI-generated content in decision-making.
	Metacognitive awareness	Recognizing and reflecting on one's own thinking patterns and decision-making processes while interacting with AI tools like ChatGPT.
Creativity	Originality of ideas	Developing unique and innovative concepts, either independently or with input from ChatGPT.
	AI-assisted creativity	Capacity of ChatGPT to enhance the creative process while acknowledging its potential limitations in fostering originality.
	Innovation in problem-solving	Applying novel and effective strategies to overcome challenges, integrating AI tools to enhance creative solutions.
	Adjustments to AI output	Customizing or refining ChatGPT-generated outputs to better align with specific needs or objectives.
Employability perception	Required skills	Competences, including technological and analytical abilities, necessary to effectively integrate AI into workflows and remain competitive in the job market.
	Automation concerns	Considerations about job displacement and changing workforce demands caused by the increasing reliance on AI tools.
	Human interaction	Highlighting the irreplaceable nature of interpersonal skills and emotional intelligence in contexts where AI cannot fully replicate human connections.
	Adaptability to AI	The ability to embrace AI as a transformative tool, perceiving it as both an opportunity to enhance productivity and a challenge requiring skill development.

Table 4. Frequencies of problem-solving, critical thinking, creativity and employability perception categories, and related codes (source: own elaboration)

Category	Codes	Number of quotes related to focus groups that		Total
		did not use ChatGPT	used ChatGPT	
Problem-solving	Time efficiency	7	8	15
	Information management	7	10	17
	Team collaboration	8	1	9
	Method comparison	7	6	13
Critical thinking	Evaluation of AI suggestions	0	11	11
	Alternative exploration	11	7	18
	Ethical reasoning	5	7	12
	Metacognitive awareness	1	8	9
Creativity	Originality of ideas	16	11	27
	AI-assisted creativity	0	11	11
	Innovation in problem-solving	6	2	8
	Adjustments to AI output	0	13	13
Employability perception	Required skills	4	2	6
	Automation concerns	11	12	23
	Human interaction	12	15	27
	Adaptability to AI	11	2	13

Frequencies are reported descriptively; relations in the networks (Figures 1 and 3) reflect how participants linked codes in their accounts rather than code counts. Table 4 shows that ChatGPT use activated distinct learning patterns. "Time efficiency" (15 mentions, 8 among users) and "information management" (17 mentions, 10 among users) enabled students to shift from mechanical execution to strategic reasoning, while "evaluation of AI suggestions" (11 mentions) and "adjustments to AI output" (13 mentions) prompted reflective control. These dynamics constitute "assisted autonomy": learners delegate routine operations while retaining self-regulation and judgment, which underpins employability perceptions in AI-mediated workplaces.

This efficiency enabled students to focus on refining and analyzing ideas rather than reproducing content. As one participant noted, *"Without the tool, it would have taken longer. It offered options and structures we hadn't considered."* The category "AI-assisted creativity" (11 mentions, Table 4) captured this link between innovation and adaptability, with ChatGPT described as a *"creative partner"* that stimulated idea generation. Yet, the immediacy of its answers sometimes discouraged deeper reflection: *"It gave ready-made responses, so we didn't question them much."* This indicates a tension between speed and independent evaluation, where creativity can shift from invention to selection and refinement.

"Adaptability to AI" (13 mentions, Table 4) emerged as a bridging category between CT and CPS. Although mostly raised by non-users as an anticipated requirement, ChatGPT users described it in practice: they recognized that ChatGPT provided useful insights but demanded constant fine-tuning. As one explained, *"Some answers weren't exactly what we needed, so we refined the prompt to make it more precise. It wasn't deep thinking."* This iterative process encouraged engagement but could remain procedural, indicating that employability gains depend on moving from prompt-tuning to substantive evaluation.

Despite these advantages, participants in both groups (15 users, 12 non-users) emphasized the irreplaceable role of human interaction as the foundation of teamwork, empathy, and communication. Team collaboration, however, was rarely mentioned by users (1 of 9 mentions), suggesting that group negotiation became less salient when ChatGPT structured the task, while interpersonal exchange remained valued as an employability asset. Overall, the results indicate a pathway from assisted efficiency to self-regulation, where automation and human judgment combine in ways that shape creativity, CT, and employability perceptions.

3.2. Non-usage of ChatGPT and its impact on employability perception

Conversely, non-ChatGPT users prioritized originality, deliberation, and teamwork, constituting a complementary pathway to AI-supported learning (Figure 3). Their discussions framed employability around interpersonal and reflective processes rather than technological mediation, highlighting that human agency remains central to skill development in AI-enhanced educational contexts.

This configuration suggests that, under constraint, non-users construct employability through self-generated reasoning and teamwork, reinforcing autonomy and accountability as employability-relevant outcomes.

“Originality of ideas” (27 mentions, 16 among non-users; Table 4) defined creativity among non-users, who relied on imagination and persistence to generate solutions. As one participant stated, *“Without ChatGPT, we worked harder to find information and structure ideas, which ultimately fostered our creativity”*. Ethical reasoning (12 mentions) emerged in both groups, but among non-users it took a distinctive form: debates about realism and fairness. For example, one group discussed, *“Additionally, by not using AI, we had to constantly question whether our solutions were coherent and realistic. For example, we debated whether including limousines to transport VIP guests was a good idea or an unnecessary extravagance”*. Likewise, “team collaboration” (8 of 9 mentions from non-users) reinforced these reflective processes, turning slower workflows into shared regulation and collective accountability.

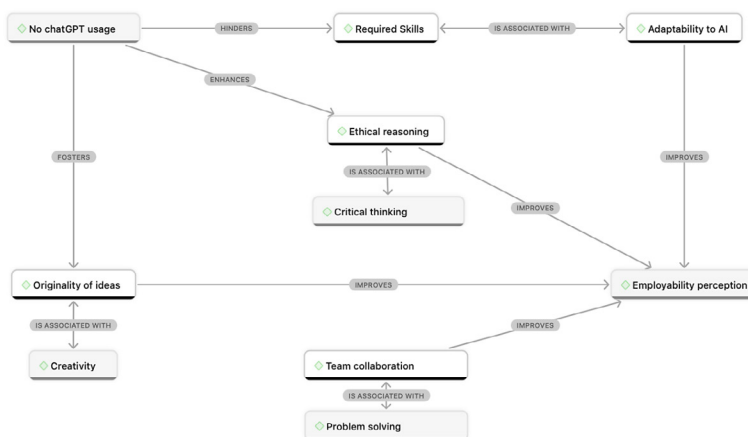


Figure 3. Network of main skills fostered in the absence of ChatGPT use (source: own elaboration)

The interaction among originality, ethical reasoning, and team collaboration created a reflective space where creativity and accountability intertwined. Participants stressed the lasting value of human-centered skills: *"AI helps with efficiency, but there will always be areas where human interaction is essential"*. These insights point to a compensatory mechanism – "slow creativity" – defined by deliberation, ethical awareness, and self-assessment. Unlike "assisted autonomy" among ChatGPT users, this mode suggests that technological acceleration and human introspection are complementary routes to employability perceptions in AI-enhanced education.

4. Discussion

This study indicates that ChatGPT shapes soft-skill development and employability perceptions by redistributing cognitive effort: routine production is externalized, while evaluation and refinement become central. Beyond efficiency, it functions as a cognitive partner that amplifies iteration in thinking and creating. However, when speed becomes the primary criterion, depth and authorship can weaken, and risks such as bias or superficial learning require ethical guidance. ChatGPT enables students to delegate routine tasks but, without reflection, automation may replace critical and creative thinking (Çela et al., 2024; García-Peñalvo, 2023). The challenge is not using AI but using it critically to preserve judgment and creative agency.

Creativity proved the most sensitive area. Students described ChatGPT as a "creative partner" that expands ideation yet also shifts creativity toward a cycle of selection and refinement rather than invention alone (Çela et al., 2024; Mohamed et al., 2024). This implies that, in AI-mediated tasks, creativity depends on explicit evaluative criteria and re-authorship: it is strengthened when students reinterpret, reframe, and justify outputs, but weakened when ready-made answers are accepted as endpoints.

These pathways explain how AI reshapes learning without displacing human agency: users externalize routine operations and reallocate effort to evaluation, while non-users sustain originality through deliberation and coordination (Sarrion, 2023). In both cases, employability perceptions increase when efficiency is subordinated to CT and creativity rather than treated as the primary outcome (European Commission, 2020a; 2020b). Ethical reasoning also stood out: students valued fairness and transparency, framing evaluation and accountability as part of CT and creative agency in AI education (Chambi Huacani & Choquetarqui Castaño, 2024).

5. Conclusions

5.1. Theoretical implications

The findings support an explanatory account in which ChatGPT use is associated with employability perceptions through adaptability, reasoning, and creative synthesis. Rather than replacing intelligence, AI can reconfigure it through reflection and balanced automation. Two mechanisms frame this model: assisted autonomy (delegating routine tasks while retaining control) and slow creativity (ethical, reflective innovation rooted in empathy) (Çela et al., 2024; García-Peñalvo, 2023; Mohamed et al., 2024). These mechanisms refine constructivist learning theory, showing creativity shifting toward ideation, selection, and refinement, where students re-author AI outputs in an iterative process. This supports the European Commission Skills Agenda (2020a; 2020b) which identify creativity, collaboration, and CT as core to employability in AI-mediated contexts.

5.2. Pedagogical implications

These findings have direct curricular implications. Universities should embed ethical and reflective AI use into digital competence training (Chambi Huacani & Choquetarqui Castaño, 2024). Activities comparing or revising AI outputs strengthen CT and self-regulation.

Educators are central: training in prompt design, bias detection, and ethics supports deep learning (García-Peñalvo, 2023; Mohamed et al., 2024). When guided well, AI enhances rather than replaces creativity. Integrating AI literacy across disciplines fosters metacognition and prepares students for hybrid workplaces (European Commission, 2020a; 2020b).

Balanced integration – combining AI-assisted work with teamwork and creative redesign – preserves originality and social intelligence, helping universities unite efficiency, creativity, and ethical values.

5.3. Limitations and future research

This study faces key limitations, including a small, single-institution sample. Future research should adopt longitudinal and cross-cultural methods to track how sustained AI use shapes employability skills. Combining qualitative and quantitative data would enhance validity.

Further studies should analyze disciplinary variations to understand how academic cultures influence AI attitudes (George-Reyes et al., 2025; Poláková et al., 2023). Testing the concepts of assisted autonomy and slow creativity in broader contexts may clarify how hybrid intelligence operates. Finally, investigating how students internalize fairness, transparency, and accountability can reveal how ethical awareness develops. These directions will help universities design AI-integrated curricula that sustain reflection, empathy, and authenticity. A subsequent quantitative study is proposed to examine the provisional relationships identified here, using validated measures of self-perceived employability, creative self-efficacy and critical-thinking disposition, complemented by independent assessments of task performance.

References

- Aldamman, K., Vallières, F., & Gilmore, B. (2024). Vignettes to support theory refinement: Methodological insights from a realist evaluation. *International Journal of Qualitative Methods*, 23. <https://doi.org/10.1177/16094069231216607>
- Al-kfairy, M., Mustafa, D., Kshetri, N., Insiew, M., & Alfandi, O. (2024). Ethical challenges and solutions of generative AI: An interdisciplinary perspective. *Informatics*, 11(3), Article 58. <https://doi.org/10.3390/informatics11030058>
- Bankins, S., Jooss, S., Restubog, S. L. D., Marrone, M., Ocampo, A. C., & Shoss, M. (2024). Navigating career stages in the age of artificial intelligence: A systematic interdisciplinary review and agenda for future research. *Journal of Vocational Behavior*, 153, Article 104011. <https://doi.org/10.1016/j.jvb.2024.104011>
- Çela, E., Fonkam, M. M., & Potluri, R. M. (2024). Risks of AI-assisted learning on student critical thinking: A case study of Albania. *International Journal of Risk and Contingency Management (IJRCM)*, 12(1). <https://doi.org/10.4018/IJRCM.350185>
- Chambi Huacani, M. C., & Choquetarqui Castaño, C. M. (2024). Implementación de herramientas basadas en inteligencia artificial en el ámbito de la educación superior [Implementation of tools based on artificial intelligence in the field of higher education]. *Revista Científica de Publicación del Centro Psicopedagógico y de Investigación en Educación Superior*, 11(1), 81–92.
- Chan, C. K. Y., & Colloton, T. (2024). *Generative AI in higher education: The ChatGPT effect*. Routledge. <https://doi.org/10.4324/9781003459026>

- Charmaz, K., & Thornberg, R. (2020). The pursuit of quality in grounded theory. *Qualitative Research in Psychology*, 18(3), 305–327. <https://doi.org/10.1080/14780887.2020.1780357>
- Chiu, Y. L., Xu, L., Hsu, Y. T., & Wang, J. N. (2024). Soft skills unveiled: A comprehensive exploration of employer preferences and employability essentials. *Assessment & Evaluation in Higher Education*, 49(8), 1105–1120. <https://doi.org/10.1080/02602938.2024.2351198>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). SAGE Publications. <https://doi.org/10.4135/9781452230153>
- Crawford, A., Weber, M. R., & Lee, J. (2020). Using a grounded theory approach to understand the process of teaching soft skills on the job so to apply it in the hospitality classroom. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 26, Article 100239. <https://doi.org/10.1016/j.jhlste.2020.100239>
- Dean, S. A., & East, J. I. (2019). Soft skills needed for the 21st-century workforce. *International Journal of Applied Management and Technology*, 18(1), 17–32. <https://doi.org/10.5590/IJAMT.2019.18.1.02>
- European Commission. (2020a). *European skills agenda for sustainable competitiveness, social fairness, and resilience*. Publications Office of the European Union. https://employment-social-affairs.ec.europa.eu/policies-and-activities/skills-and-qualifications/european-skills-agenda_en
- European Commission. (2020b). *The European Qualifications Framework: Supporting learning, work, and cross-border mobility*. Publications Office of the European Union. <https://europa.eu/europass/en/european-qualifications-framework-eqf>
- Fischer, A., Greiff, S., & Funke, J. (2012). The process of solving complex problems. *The Journal of Problem-Solving*, 4(1), 19–42. <https://doi.org/10.7771/1932-6246.1118>
- García-Peñalvo, F. J. (2023). La percepción de la inteligencia artificial en contextos educativos tras el lanzamiento de ChatGPT: Disrupción o pánico [The perception of Artificial Intelligence in educational contexts after the launch of ChatGPT: Disruption or Panic]. *Education in the Knowledge Society (EKS)*, 24, Article e31279. <https://doi.org/10.14201/eks.31279>
- George-Reyes, C. E., Avello-Martínez, R., & Buenestado-Fernández, M. (2025). Perceptions of ChatGPT and the complexity of its impact among higher education students: Evidence across ten countries of Latin America and Europe. *Educational Process International Journal*, 15(1). <https://doi.org/10.22521/edupij.2025.15.171>
- Gibson, W. J., & Brown, A. (2009). *Working with qualitative data*. SAGE Publications. <https://doi.org/10.4135/97808057029041>
- Giordano, V., Spada, I., Chiarello, F., & Fantoni, G. (2024). The impact of ChatGPT on human skills: A quantitative study on Twitter data. *Technological Forecasting and Social Change*, 203, Article 123389. <https://doi.org/10.1016/j.techfore.2024.123389>
- Halpern, D. F., & Dunn, D. S. (2022). Critical thinking: An introduction. In *Thought and knowledge: An introduction to critical thinking* (6th ed., pp. 1–32). Routledge. <https://doi.org/10.4324/9781003025412>
- Liu, Q., Hu, A., Gladman, T., & Gallagher, S. (2025). Eight months into reality: A scoping review of the application of ChatGPT in higher education teaching and learning. *Innovative Higher Education*, 50, 1677–1700. <https://doi.org/10.1007/s10755-025-09790-4>
- Miani, A. M., Karami Dehkordi, M., Siamian, N., Lassois, L., Tan, R., & Azadi, H. (2023). Toward sustainable rural livelihoods approach: Application of grounded theory in Ghazni province, Afghanistan. *Applied Geography*, 154, Article 102915. <https://doi.org/10.1016/j.apgeog.2023.102915>
- Mohamed, A. M., Shaaban, T. S., Bakry, S. H., Guillén-Gámez, F. D., & Strzelecki, A. (2024). Empowering the faculty of education students: Applying AI's potential for motivating and enhancing learning. *Innovative Higher Education*, 50, 587–609. <https://doi.org/10.1007/s10755-024-09747-z>
- Poláková, M., Suleimanová, J. H., Madzík, P., Copuš, L., Molnárová, I., & Polednová, J. (2023). Soft skills and their importance in the labour market under the conditions of Industry 5.0. *Heliyon*, 9(8), Article e18670. <https://doi.org/10.1016/j.heliyon.2023.e18670>
- Salinas, D., & Garrido, C. G. (2022). Teacher educators' adaptability process when faced with remote teaching. *Teaching and Teacher Education*, 120, Article 103890. <https://doi.org/10.1016/j.tate.2022.103890>
- Sarrion, E. (2023). The implications of ChatGPT on employment and society. In *Exploring the power of ChatGPT*. Apress. https://doi.org/10.1007/978-1-4842-9529-8_8
- Strzelecki, A. (2024). Students' acceptance of ChatGPT in higher education: An extended unified theory of acceptance and use of technology. *Innovative Higher Education*, 49, 223–245. <https://doi.org/10.1007/s10755-023-09686-1>