Report for Specific Objective 1.1

"To diagnose the teachers' level of knowledge and use of Generative AI"

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1. Context: the EdU-InA Project

Digital transformation is a priority on Spanish agendas: the Spanish Digital Plan 2025 (Government of Spain, 2020); the National R&D&i Plan 2021-2023 (Government of Spain, 2021), and on European agendas: the Digital Education Action Plan 2021-2027 (European Commission, 2025). Universities must accelerate their digital transformation, focusing on AI from the perspective of needing to learn about it, learn from it, and prepare for it. Since the popularization of ChatGPT in November 2022, society has been immersed in what is now considered the "fourth industrial revolution" (Chakraborty et al., 2022).

In this context, the EdU-InA project “Policies and practices of generative AI in higher education” (PID2023-149069OA-I00) was designed. EdU-InA is a R&D&I project funded by the Ministry of Science, Innovation and Universities. It seeks to understand the academic and professional knowledge and use of Generative Artificial Intelligence (GenAI, hereinafter) in Spanish universities, with the aim of designing a roadmap to ensure the efficient, ethical, and equitable implementation of AI.

The project addresses how this technology is being incorporated into the main pillars of university education: faculty, students, curriculum, and educational policies. To this end, EdU-InA involves researchers from the Autonomous University of Barcelona (coordinating institution), Complutense University of Madrid, University of Granada, University of León, University of Vigo, Open University of Catalonia, and the collaboration of Mondragon University.

The fundamental purpose of EdU-InA is to understand and improve the implementation of Generative Artificial Intelligence in university education, analyzing the preparedness of Spanish universities to face its challenges and opportunities, providing scientific evidence. To achieve its objectives, it focuses on three main actors (teachers, students and leaders of higher education institutions), which are embodied in 7 specific objectives:

GO1: Analyze the educational practices of generative Artificial Intelligence in university teaching.

- SO1.1: To diagnose the teachers’ level of knowledge and use of GenAI.
- SO1.2: To identify good practices of how to use AI in university teaching for each discipline.
- SO1.3: To describe the possibilities and challenges of incorporating generative AI into different syllabuses.
- SO1.4: To analyze the uses of generative AI for education by university students.

GO2: To analyze policies and viewpoints on the deployment of Generative Artificial Intelligence in university education.

- SO2.1: To analyze the discourses and opinions on the incorporation of generative AI in university education.
- SO2.2: To describe the current policies and strategies on the use of generative AI in universities.
- SO2.3: To design a roadmap to help universities implement generative AI efficiently, equitably, and ethically in higher education.

Although GenAI offers significant benefits (personalized learning, instructional design, and assessment), the project includes a transversal, critical perspective to evaluate its limits, as well as its ethical and legal implications. EdU-InA seeks to contribute to digital transformation through the effective, equitable, and ethical integration of GenAI into higher education.

The EdU-InA team is firmly committed to open science. Therefore, all materials and results derived from the research conducted are available in open repositories and accessible from the EdU-InA website: https://eduina2427.wixsite.com/edu-ina. In addition, at the end of this report (Appendix I) the dissemination actions related to the objective set out in this report carried out up to the time of its publication are reported.

2. Introduction

In recent years, Generative Artificial Intelligence (GenAI) has made a significant impact on higher education, generating intense debate about its pedagogical, ethical, and organizational implications. Unlike other forms of artificial intelligence more focused on recognition or classification, GenAI is characterized by its ability to create original content based on human instructions and through the use of advanced machine learning and natural language processing models (Kasneci et al., 2023). Tools such as ChatGPT, Copilot, and Gemini have achieved widespread adoption in a very short time, changing the way teachers and students access information, complete tasks and design materials.

On the one hand, GenAI offers significant pedagogical opportunities, such as the design of adapted resources, the promotion of active learning or the automation of repetitive tasks; on the other hand, it raises relevant challenges regarding ethics, assessment, authorship and institutional regulation. Numerous studies highlight the need to address its integration from a critical perspective that considers both teaching practices and institutional structures, the central role of teachers' perceptions and attitudes, as well as the development of robust digital competences that incorporate the ethical and pedagogical dimensions (Redecker, 2017; Tlili et al., 2023; Zawacki-Richter et al., 2019).

Despite the extensive media coverage and initial enthusiasm, several studies confirm that the actual degree of pedagogical integration of AI is still limited and uneven, depending on factors such as the discipline, teaching experience and specific training received (Kasneci et al., 2023; Tlili et al., 2023). In this context, having solid empirical data on teachers' knowledge, use, and stance is essential for designing training policies and institutional strategies that respond to real needs.

Therefore, the specific objective 1.1 of the EdU-InA "Policies and Practice on Generative AI in Higher Education" project focuses on diagnosing the level of knowledge, use and stance of university faculty in relation to GenAI for teaching. This specific objective will contribute to the project's ultimate goal of providing a solid foundation for the design of training policies, support strategies and regulatory frameworks, so that the integration of GenAI into higher education is undertaken in a critical, responsible and pedagogically sound way.

This report is structured in five main sections. Following this introduction, the second section describes the work process developed to achieve the specific objective 1.1, detailing the phases of literature review, questionnaire design and validation, sampling strategies, and the ethical and technical

procedures employed during data collection. The third section outlines the methodology followed, based on a non-experimental, descriptive, exploratory design, with the development and validation of an ad hoc questionnaire administered to a sample of university faculty from six Spanish universities. The fourth section then presents the results, organized into three dimensions: knowledge, use, and stance. These dimensions allow us to understand the faculty's level of familiarity, practices and perceptions regarding the incorporation of GenAI into university teaching. The fifth section presents the conclusions, summarizing the most relevant findings and the implications for the design of institutional policies and training strategies.

3. Work process

Objective 1.1 has been structured into a series of tasks ranging from the analysis of the current situation to the preparation of the results report. Throughout the work process, AI has been used for tasks related to the generation of definitions, creation of figures and translation of documents. The description of its use can be found in Appendix II. The following table shows the timeline followed:

SO1.1. To diagnose the teachers' level of knowledge and use of GenAI														
Month	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.
Task														
A.1.1.1. Literature review on the use, knowledge and stance of AI by teachers														
A.1.1.2 Selection and contact with the sample														
A.1.1.3 Design and validation of a questionnaire to diagnose the level of knowledge, use and stance of AI by teachers														
A.1.1.4. Questionnaire distribution														
A.1.1.5 Response monitoring (sending to new contacts/reminders)														
A.1.1.6 Data processing and coding														
A.1.1.7 Data analysis														
A.1.1.8 Results report for SO1.1														

Table 1: Timeline for Specific Objective 1.1.

A1.1.1. Literature review on the use, knowledge and stance of AI by teachers

The process began with an in-depth content review to understand teachers' use and knowledge of GenAI. Both a literature review and a review of instruments were conducted, which allowed for the definition of key concepts, the identification of findings and the establishment of a theoretical framework, which would later inform the design of the data collection instrument. Although the initial plan was to address the teachers' use and knowledge of GenAI, this first phase of the study revealed the

need to also explore their stance regarding GenAI. Therefore, three dimensions were considered: use, knowledge, and stance with regards to GenAI.

The review revealed that many studies were based in Asian contexts, involved small sample sizes and showed positive results. Furthermore, most of the reviewed studies used questionnaires with closed-ended questions. Several dimensions were identified (ethics, privacy, barriers, usefulness, emotions, etc.), along with a growing interest among teachers in these tools, although some barriers persisted (lack of time, ethical concerns, fear of limiting creativity, etc.).

A1.1.2. Selection and contact with the sample

The sampling strategy was designed in December 2024. Since the aim was to obtain responses from faculty members across different degree programs and universities, and given the fact that each faculty and university had specific regulations regarding contact with faculty, the necessary procedures for distributing the questionnaire to each institution were identified, considering the need for approval by ethics committees or internal permissions. The most appropriate distribution channels were agreed upon in each case (including institutional mailing lists, faculty contacts, submission to research dean offices, etc.), allowing for tailored planning according to the specific circumstances of each institution.

In January 2025, the necessary procedures were carried out to request approval of the instrument from the UAB Ethics Committee, which was obtained in February of the same year. The other participating universities, except for the UOC, did not require any additional procedures, as the approval report from an ethics committee was sufficient. In the case of the UOC, formal approval was required. The project was registered internally at that university and then its approval was requested from the Ethics Committee (approval granted on March 13, 2025). Subsequently, the sample was contacted in different ways, according to the characteristics of each university (Table 2), and at various times, with the aim to encourage participation.

University	Type of contact	Sender	Date
Autonomous University of Barcelona	Faculties and centers	Autonomous University of Barcelona	3/3/2025
Complutense University of Madrid	Faculties and centers	Autonomous University of Barcelona	3/3/2025
University of León	Departments	Autonomous University of Barcelona	10/3/2025
	Faculty members	University of León	24/4/2025
	Faculty members	University of León	14/5/2025
University of Vigo	Faculties and centers	Autonomous University of Barcelona	4/3/2025
	Departments	University of Vigo	7/4/2025-8/4/2025
	Faculty members	Autonomous University of Barcelona	5/5/2025
University of Granada	Faculties and centers	Autonomous University of Barcelona	19/3/2025
	Departments	Autonomous University of Barcelona	5/5/2025
Open University of Catalunya	Faculty members	Open University of Catalunya	13/3/2025
	Faculty members	Open University of Catalunya	11/4/2025

Table 2: Process of sending the questionnaire to the sample.

A1.1.3. Design and validation of a questionnaire to diagnose the level of knowledge, use and stance of AI by teachers

Following the findings of the literature and instrument review, a questionnaire was designed, consisting of closed-ended (Likert-type, single-choice and multiple-choice) and open-ended questions. The questionnaire was organized around four main sections: sociodemographic data, knowledge, use and stance. The designed questionnaire underwent a validation process that included review by experts from several universities, who evaluated the items according to criteria of importance, appropriateness, univocality and sufficiency. The questionnaire was also piloted with a small group of teachers. After both processes, adjustments were made to the wording of the items, response scales and overall structure of the instrument. The questionnaire was later translated into Catalan and Galician. Afterwards, the questionnaire was also translated into Basque, due to the participation of Mondragon University as a collaborating institution in the project. However, its results are not presented in this report, as it was not part of the original target sample.

A1.1.4 and A1.1.5. Questionnaire implementation and monitoring of data collection

The questionnaire was administered between March and June 2025. During the process, the number and profile of responses were actively monitored to foster the participation of those areas and universities with lower representation. Ultimately, the questionnaire concluded with a balanced distribution between both aspects.

A1.1.6. and A1.1.7. Data processing, coding and analysis

After the data collection, incomplete records were removed and the data were coded according to predefined categories, respecting the established ethical and methodological principles. Quantitative analysis allowed for the exploration of response patterns, levels of knowledge, types of use and differences among variables, with the support of SPSS software (v.31).

For the qualitative analysis, manual coding was chosen based on an in-depth reading of the data, identifying relevant units of meaning. Labels and codes were assigned to the significant fragments through an iterative process of constant comparison. The categories were reorganized into key dimensions, ensuring internal coherence and theoretical saturation.

A1.1.8. Report on the results of OE1.1

As a final step in achieving the specific objective 1.1, the results report was written, outlining the methodological process, the most relevant findings and an initial interpretation of the data. This document is intended to serve as a basis for subsequent research objectives, as well as for future dissemination activities.

4. Method

The research design used to diagnose the level of knowledge, use and stance of university teachers regarding GenAI was a descriptive/exploratory, non-experimental study, for which an ad hoc questionnaire was developed. This questionnaire was created after a review of questionnaires published in whole or in part in the Scopus database (N=21), which is of reference in the education field. This review was conducted in November 2024, using the mandatory descriptors “GenAI” and “teacher,” along with terms such as use, knowledge, stance, concerns, dilemmas and attitudes. Content analysis was performed using the following categories: year, title and authors, educational stage, context (country/continent), question types, areas or dimensions, items, GenAI, validation (yes/no), and highlighted citations. Questions and items obtained from this analysis were incorporated into version 1.0 of the questionnaire.

In several meetings, the research team developed version 1.1 of the questionnaire, which was created in Microsoft Forms. This version underwent a pilot test with research faculty from the universities that participate in the study (N=14). The feedback received after the pilot test was considered and the necessary modifications were made, resulting in version 1.2 of the questionnaire.

Subsequently, version 1.2 underwent validation with an expert panel of 18 participants from two groups: theoretical experts in educational technology from universities outside the participating universities, on the one hand; and practical experts –that is, faculty members with permanent employment at the participating universities who were not from the field of educational technology–, on the other hand. Validation was conducted using a template with four categories: univocality, appropriateness, importance, and sufficiency (Table 3). The template was created in Microsoft Forms (Appendix III), and included the questionnaire questions and categories, which were scored using a 5-point Likert scale. The option to add text comments was also allowed.

Category	Definition
Univocality	Evaluates whether the item is clear and unambiguous, allowing for unique interpretations.
Appropriateness	Evaluates whether the item is suitable for collecting relevant information about teachers' knowledge, use, and positioning.
Importance	Refers to the relevance and usefulness of the item to collect relevant information about teachers' knowledge, use and positioning with respect to Generative AI in university teaching.
Sufficiency	Refers to the number of items that belong to the question and whether these are sufficient to answer the question and obtain a complete measurement.

Table 3: Validation categories.

The analysis of the validators' responses was performed using means and standard deviations (SD) and a review of the comments left in the observations section. Items with means below 4.7 were revised, as well as those with high standard deviations, in order to achieve greater consensus. This resulted in version 1.3, the final version of the questionnaire (Appendix IV), which is summarized in Figure 1. The final version was translated into Catalan and Galician to encourage participation among the sample.

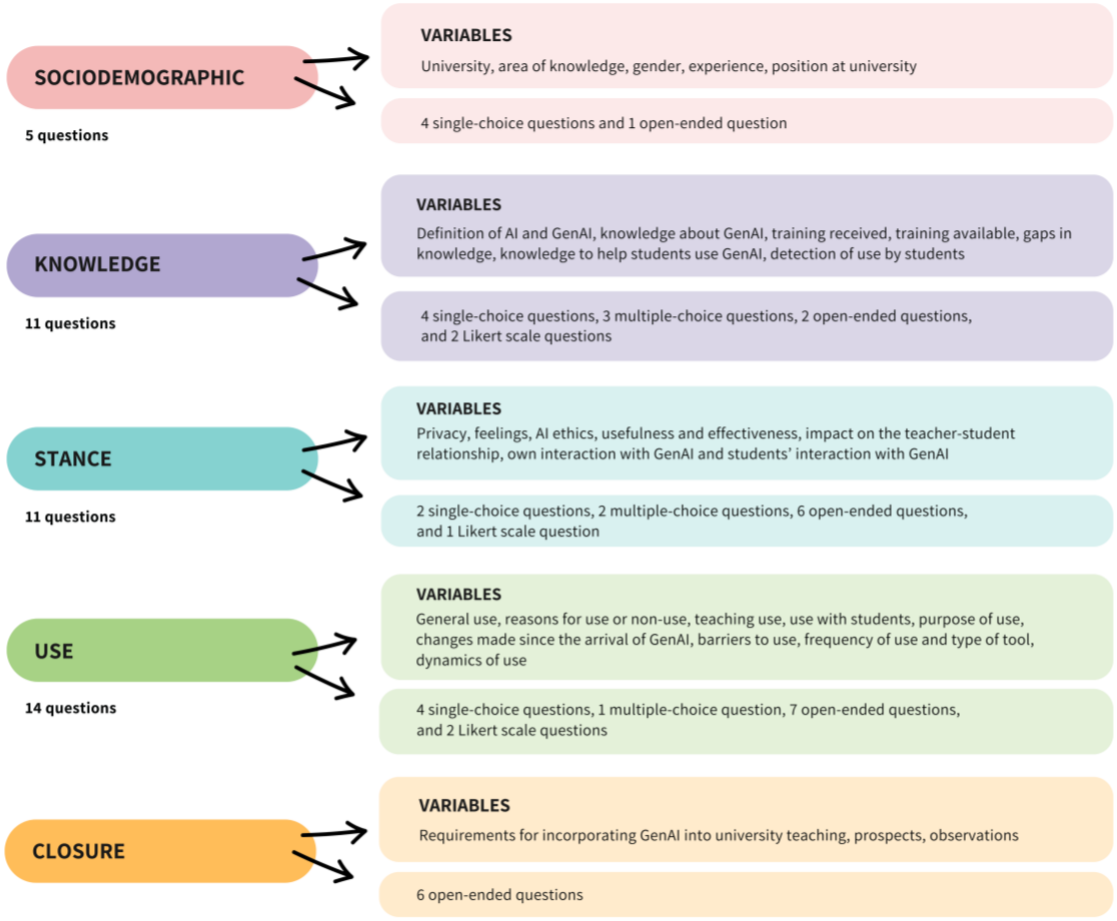


Figure 1: Summary of the questionnaire by sections.

Next, the project was sent to the ethics committee at the Autonomous University of Barcelona, as the coordinating institution of the project. The project received its approval by the ethics committee (favorable report UAB-CERec92 of 21/02/2025).

The quantitative analysis consisted of descriptive and inferential tests. The SPSS programme (v.31) was used for quantitative data processing, which allowed the team to explore response patterns, levels of knowledge, types of use and differences according to variables. The quantitative data from the questionnaire were analysed using frequencies, means and standard deviation.

As for the open-ended questions, the responses were manually coded, identifying relevant units of meaning. Labels and codes were assigned to significant fragments through an iterative process of constant comparison. For each item, a matrix of codes was created with definitions and representative examples for each one. The categories were reorganised into key dimensions, ensuring internal

consistency and theoretical saturation. In order to ensure the traceability and transparency of the analysis, the entire process was recorded. This process was carried out by all the researchers, who reviewed and refined the codes.

The sample consists of 730 teachers from different Spanish universities, distributed according to the size of the universities. Specifically, 24.6% are from the University of Granada, 22.1% from the Autonomous University of Barcelona, 18.2% from the Complutense University of Madrid, 15.3% from the University of Vigo, 10.3% from the University of León and 8.8% from the Open University of Catalonia. In addition, 0.7% of the sample of teachers from other universities who wished to participate in the study were included.

With regards to the field of knowledge, representation across disciplines is fairly balanced, considering that some fields have more teaching staff than others. In this regard, 38.6% are from Social Sciences and Law, 24.1% from Science and Engineering, 20.1% from Arts and Humanities, and 17.1% from Health Sciences. In terms of gender, the sample is mainly female (47.4%) and male (50%), although non-binary individuals (1.1%), individuals who prefer not to answer (1.4%), and others (0.1%) are also included.

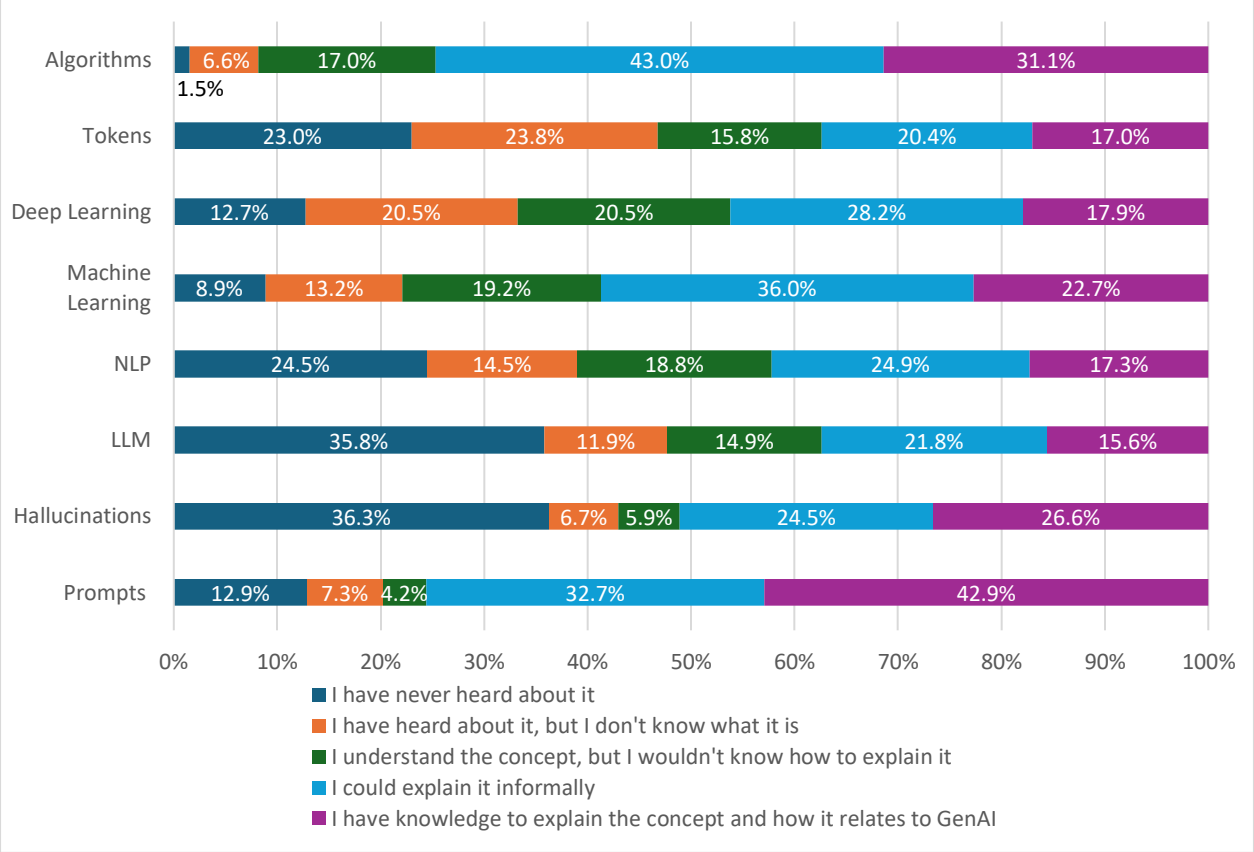
The mode in age and teaching experience are 50 and 10 years, respectively, although the average is 48.28 years (SD = 10.36) and 17.09 years of experience (SD = 11.08). The teaching staff who participated are mainly full-time and permanent employees (60.4%), representing the different professional categories (pre-doctoral, post-doctoral, assistant, tenured, professor, visiting, associate, substitute and others).

5. Results

The results presented below are organized according to the three dimensions analyzed in the EdU-P-InA questionnaire: knowledge, use and positioning.

5.1. Knowledge about GenAI

The results show how most teachers know what Generative AI is: 49.9% could explain it informally and 32.9% have the knowledge to explain what it is. Only 8.1% understand what it is but would not be able to explain it, 5.9% have heard of it but do not know what it is, and 3.3% have never heard of Generative AI. Regarding whether they know the difference between AI and GenAI, on a scale of 1 to 5 where 1 is "none" and 5 is "a lot", the average reaches an intermediate value of 3.21 (SD = 1.22). Delving deeper into their conceptual knowledge (Graph 1), most teachers would be able to explain –informally or with solid knowledge– the concepts of prompts, hallucinations, machine learning, and algorithms, while most teachers would not be able to explain the concepts of tokens, deep learning, NLP and LLM.



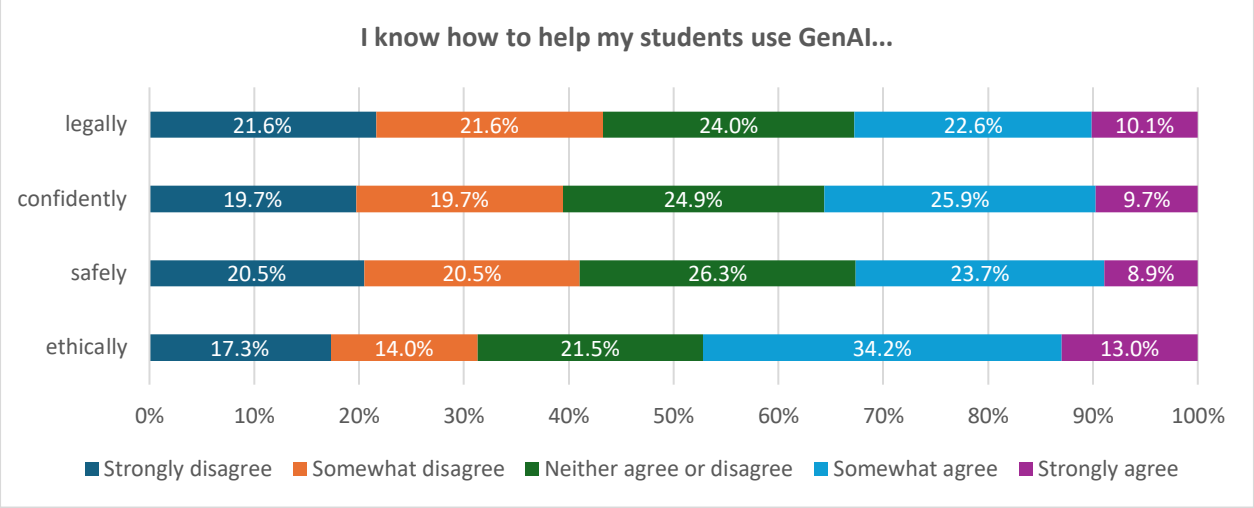
Graph 1: Teachers' knowledge of specific terms related to GenAI.

Most teachers (56%) feel that they have a good level of competence in the use of GenAI in university teaching. 32.7% say they are able to use GenAI creatively, confidently, critically and responsibly to solve problems in their context; and 21% of teachers indicate that they are able to put GenAI at the service of pedagogy, having their own thoughts on its advantages and disadvantages; although only 2.3% think they are able to develop regulations, protocols and modes of action at all levels (macro, meso and micro) for the use of GenAI. Only 12.9% of participants indicate that their level is very low or non-existent, and the remaining 31.1% are able to understand basic concepts and how GenAI works (such as what an algorithm is, what machine learning is, etc.).

58.4% of teachers have received training on GenAI. However, of those who have received training, only 14.5% have received training in technological knowledge and 19.9% have received reflective training. Mainly, 37.7% of teachers have received instrumental training (to learn how to use a specific tool) and 35.3% have received pedagogical training (to learn how to use a tool for specific educational purposes). 56.2% of teachers report that their universities offer training, whereas 39.2% do not know whether this type of training is offered, and 4.6% say that no training is offered.

Finally, as for the training section, in the form of an open question, the teaching staff indicated which aspects they would like to receive further training on in relation to the use of GenAI in university teaching. After coding, the most prominent topics were: general training in GenAI and teaching (18.2%), creation of teaching resources (10.3%), detection of GenAI use by students (9.3%), technical/instrumental aspects on how GenAI works (8.5%), how to use it responsibly (7.8%), how the emergence of GenAI is transforming teaching (7.7%), application of GenAI in the specific area of knowledge they teach (6.6%), assessment (6.3%) and implications for security, legality and ethics (6.2%).

These results are in line with the teachers' knowledge on how to help their students use Generative AI ethically, safely, confidently and legally. As shown in Figure 2, less than half of teachers strongly agree or agree with the statements that they know how to help students use GenAI correctly in different ways.



Graph 2: Teachers' knowledge to help their students use GenAI legally, confidently, safely, and ethically.

Overall, teachers report not to have strategies for detecting misuse or unauthorized of GenAI by students (60.7%). Those who do have strategies mainly mention the use of AI detection tools (41.2%) and the identification of writing patterns which are characteristic of GenAI (35.3%). Other strategies reported by faculty include verifying learning through other activities such as oral tests (13.7%), comparing the suspected AI-generated tasks with other student assignments (9.8%), intuition (9%), and identifying superficial, inaccurate, or downright hallucinatory content (7.8%). There is also a small proportion of teachers who look for hidden signs of AI (6.3%), compare the results with a response they generated by the GenAI themselves (5.5%), checking the references (5.5%), searching the content for vocabulary or concepts unrelated to what has been covered in class (3.1%), or comparing and identifying similarities among student submissions (2.0%).

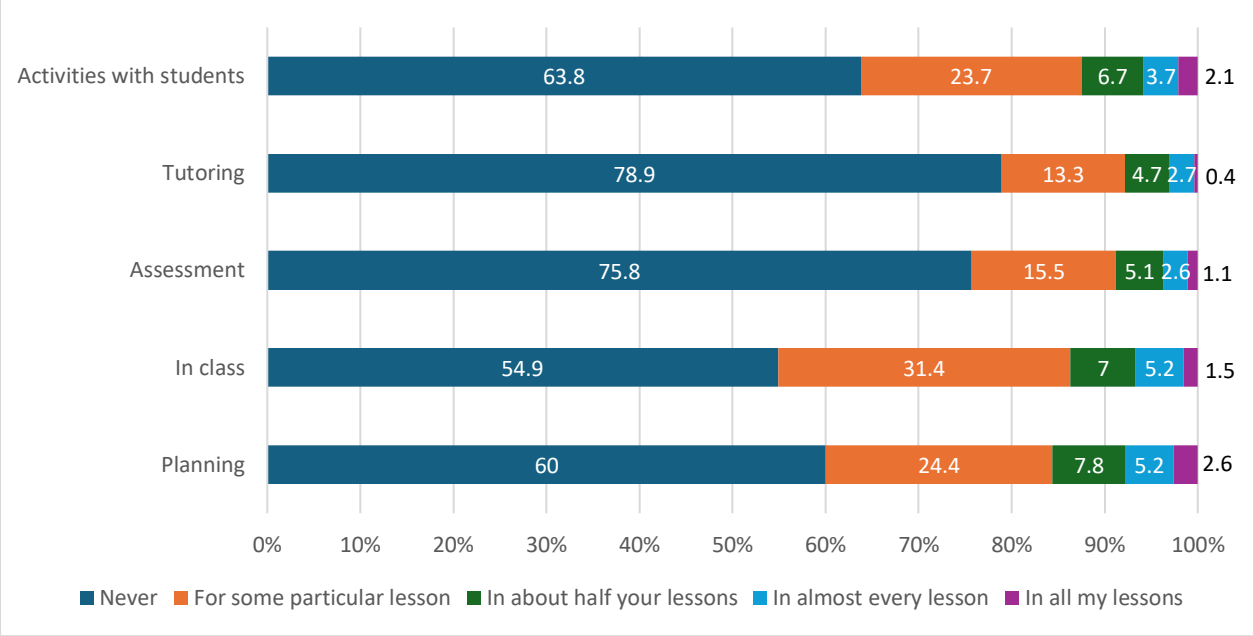
5.2. Uses of GenAI in teaching

Currently, the percentage of teachers who use GenAI in teaching (53.4%) seems to be balanced against those who do not (46.6%). The reasons given by the latter are a perceived lack of need to do so and satisfaction with traditional methods (19.4%), lack of confidence in the quality and accuracy of GenAI (7.4%), ethical, pedagogical or ecological reasons (6.2%), unsuitability for their disciplines (5.5%), lack of time or resources to incorporate it (5.2%), and fear of losing human skills (4.6%).

Delving deeper into the reasons why they do use GenAI in their teaching practice, the motives are more diverse. The most common reason is the speed and time savings involved in using it for teaching tasks

(5.5%). Most of the reasons given refer to the tool's potential: the perception that it is a useful tool for their work (4.5%), the efficiency and quality of processes when using it (4.5%), the generative capacity of AI tools themselves (3.2%), the possibility of streamlining more bureaucratic and mechanical tasks (2.5%), and the fact that they offer a starting point for a draft of initial ideas (2.2%). Other reasons include the duty as teachers to look towards the future (4.1%) and the fact that their use helps to bring them closer to their students (2.6%).

As it can be seen in detail in Graph 3, although more than half of teachers use GenAI in teaching, only 15.6% have used AI to plan teaching, 13.7% to teach a lesson, and 12.5% to carry out activities where students use GenAI, in at least half of their classes. Similarly, when it comes to assessment, 91.2% have never used it or have only used it in a specific class, and 92.2% have never used it or have only used it very occasionally for tutoring.



Graph 3: Frequency of GenAI use in different parts of the teaching sequence.

Although few teachers have incorporated Gen into the activities that students do, those who have done so have used it for searching and comparing information (5.7%), solving cases and practical exercises (5.6%), generating and understanding texts (5.2%), tasks related to assessment and self-assessment (4.9%), the creation of multimedia content (4.8%), debate, reflection and metacognition (4.5%), as well

as the use of GenAI as an assistance tool in programming and modelling (3.1%), and even the design of teaching materials (2.8%).

With relation to the specific tasks they perform using GenAI related to teaching, the most common among teachers are adapting materials (35.3%), creating teaching materials (28.9%), designing assessment activities (27.8%), searching for references (25.9%) and structuring their presentations (22.6%). To a lesser extent, teachers also use it to create assessment instruments (18.2%), structure and organize classes (16.2%) and offer feedback for improvement on the activities carried out (11.2%). Finally, a small proportion of teachers also use it to assist with grading (3.2%).

A large proportion of teachers have made no changes to their teaching or have made minimal or insignificant changes (43.7%). Those who mention changes include improved efficiency in preparing materials (24.1%), redesigning assessment, especially considering the risk of AI-generated tasks (14.5%), and other modifications such as incorporating GenAI into the teaching methodology (4.9%), designing more elaborate tasks and content (4.4%), and controlling or restricting the use of these tools by students (4.7%). To a lesser extent, some teachers have also put a greater emphasis on debate, ethical and critical reflection on GenAI (2.8%) and the integration of specific tools along with self-taught training for teachers (1.4%).

With regards to the barriers to the use of GenAI, as this was an open-ended question, a large number of perspectives were identified, which were grouped into 21 codes. However, the most recurrent barriers can be summarized into four types: teacher expertise, technical aspects, ethical issues, and student characteristics (Figure 2).

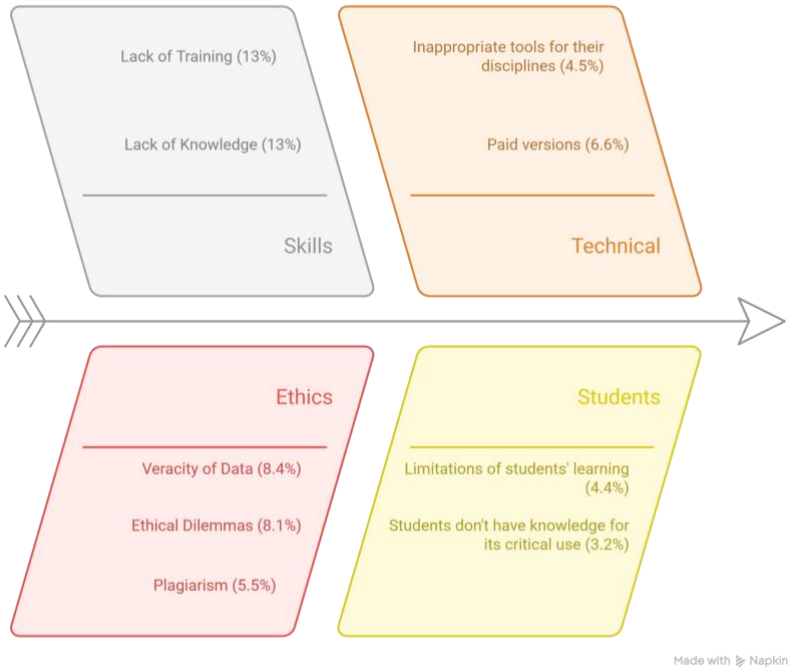
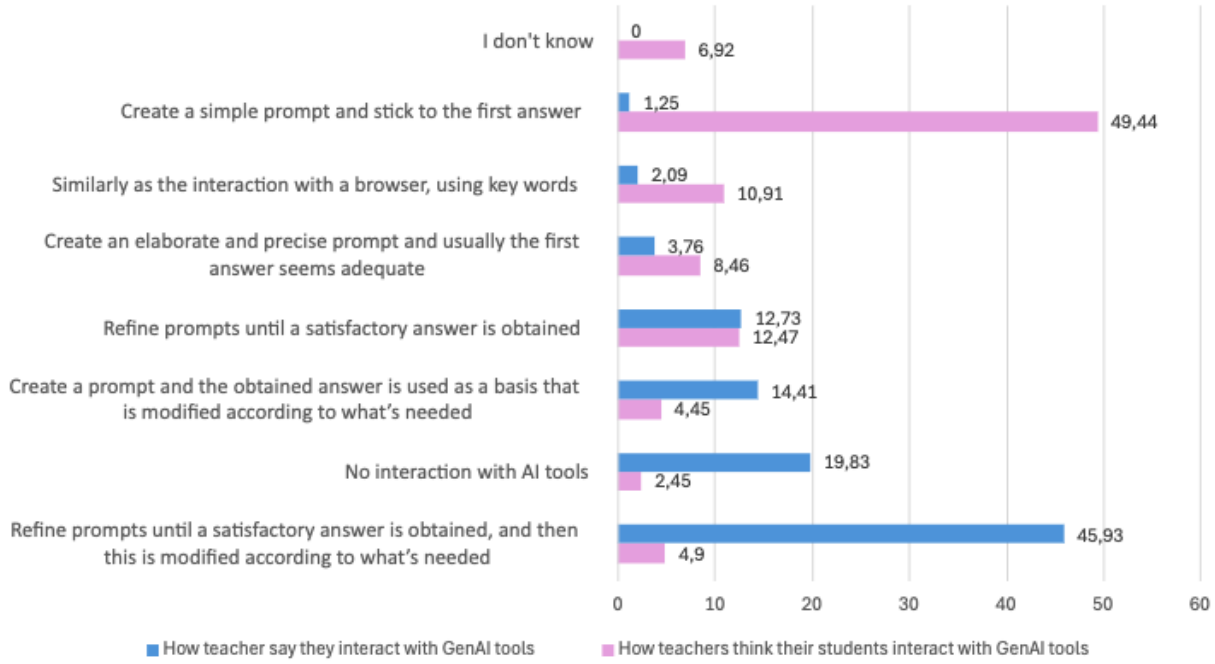


Figure 2: Summary of the most common barriers to the integration of GenAI in university teaching.

As for the type of GenAI tools that teachers have used for teaching, it is mainly text generation (54.4%), followed by image generation (36.2%) and presentation generation (30.3%). A very small proportion of teachers have used AI for video generation (8.9%) or voice or audio generation (8.6%).

The most common way for teachers to interact with text-generation AI tools is by refining prompts until they obtain the most satisfactory response and then modifying it according to their needs (42.9%). The least common approach is to make a simple prompt and accept the first response (1.4%). Interestingly, teachers' perception of how they think their students interact with GenAI tools is exactly the opposite. Most teachers believe that students make a simple prompt and stick with the first response (48.4%), while refining prompts and modifying responses according to their needs is the least common way that teachers think students interact with GenAI (3.8%). Graph 4 shows all the options, for both how teachers interact with GenAI tools (shown in blue) and how teachers think students interact with GenAI tools (shown in orange).



Graph 4: Ways to interact with GenAI tools for teachers and teacher's perception of students.

34.5% of teachers state they do not check the results they obtain from Generative AI tools, and 91.4% believe that their students do not either. Those who do check the results mainly do so by comparing them with their own knowledge (16.5%), with other available information (18.2%) and by requesting and reviewing the sources used by AI (16.8%).

5.3. Stance on GenAI for teaching

Most teachers do not review or are unaware of the ethical, privacy or security issues related to the use of GenAI. Specifically, only 19.2% review the terms and conditions, 35.1% are aware of how the data they provide to GenAI will be used, 19.5% know how the data is stored, 30.1% know what the implications are for their privacy, and 17.8% know about the implications for the privacy of third parties.

When asked to describe in one word how the integration of GenAI in university education makes them feel, the most common responses were related to insecurity (8.3%), expectation (7.5%) and usefulness (5.9%). A word cloud is provided for visual reference (Figure 3), with the most common responses showing in larger font sizes.

Figure 3: Grouping of responses to the word teachers would use to describe how GenAI makes them feel.

Of the 16 emotions given in the questionnaire, most teachers identify the integration of GenAI in university teaching with concern (53.6%), followed by enthusiasm (32.3%), fun (25.8%) and satisfaction (24.7%). In summary, following the categorization of Beaudry and Pinsonneault (2010), the most frequently reported emotions are *challenge emotions*, followed by *deterrence emotions*, and least frequently reported are *achievement emotions* and *loss emotions*.

Almost two-thirds of teachers strongly agree or agree that GenAI has an impact on the teacher-student relationship (62%), while only 8.3% disagree or strongly disagree that it has an impact on said relationship. However, only 33.7% believe that GenAI changes the reality of the context. For 11%, the future presents an opportunity to improve the teaching-learning process and offer more skills-based learning (2.1%) in which GenAI "facilitates teaching" (6.3%). However, 10.1% consider it a “challenge” that requires effort on teacher end, that “forces major changes” (7.4%) or even that learning will be lost (6.2%). 8.1% of teachers view the future with concern regarding the possible elimination of jobs (2.5%), ethical risks (2.1%), fear about data security and management (1.1%), environmental damage due to the consumption of natural resources in its use (1.1%) and the possible increase of “social inequalities” (0.8%). Some of the responses (4.2%) consider that spaces for joint reflection on the use of GenAI should be created in the future. 2.7% of the responses indicate that GenAI will be used much more in the future,

while a minority consider that technologies will be eliminated or should be eliminated in the future (0.4%).

Delving deeper into the reasons why teachers believe that GenAI has –or doesn't have– an impact on the teacher-student relationship, the open-ended questions revealed different perspectives. Some (3.8%) believe that it has a negative impact, while others (2.1%) believe that it has a positive impact, in general. Other teachers (9.3%) believe that GenAI has created a context in which contact with students is lost because they prefer to interact with GenAI. Additionally, 15.8% say that the relationship with students has deteriorated due to mistrust, and 6.8% say that GenAI leads to a lack of self-reflection and skills in students, which also changes the relationship between teachers and students. Opposedly, others believe that the relationship will be more direct with greater exchange and more time for it (1.9%). 2.6% indicate that the relationship is now more horizontal with regards to the interactions, and situations in which it is not the teacher who has the most knowledge, and that students have a higher level of competence (1.5%). On the other hand, the reasons why teachers believe that GenAI has little or no impact on the relationship with their students are because GenAI does not replace a teacher (29.5%), because the tool is one thing and the pedagogical relationship is another (13.1%), and because the impact depends on the use, context or course (8.2%).

Teachers are polarized with regards to their concerns about the risks associated with its use, with a tendency towards concern. 49.6% agree somewhat or strongly that they are concerned about it, while 28.9% disagree somewhat or strongly, with 21.5% identifying as neutral. As for the limitations of GenAI, there is a fairly balanced distribution, with 29.3% disagreeing or somewhat disagreeing that they are concerned about the limitations of GenAI and 36.9% agreeing somewhat or strongly, with a third taking a neutral position (33.7%). Clearer seems to be the concern regarding student plagiarism, with 79.1% somewhat or strongly agreeing; the lack of original production, with 84.9% somewhat or strongly agreeing; and the biases of GenAI, with 74.5% somewhat or strongly agreeing.

Regarding the perception of GenAI efficiency and usefulness, 43.6% strongly agree or somewhat agree that it is efficient for teaching, and 58.4% strongly agree or somewhat agree that it is useful for teaching. In both cases, the neutral position accounts for one-third of the responses (38.5% and 30%, respectively). The perception regarding learning is similar, although with lower percentages. 39.7% strongly agree or somewhat agree that GenAI is efficient for learning, and 49.4% somewhat agree or

strongly agree that it is useful for learning. Again, the neutral position accounts for one-third of the responses (38.9% and 31.8%, respectively).

With relation to penalizing students who use GenAI for academic activities, the results show that 64.8% of teachers do not penalize them, compared to 35.2% who do. The scenarios in which teachers do penalize students, the most common situations were: plagiarism, unethical use and academic fraud (28.4%), lack of critical reflection, supervision and authenticity or straight copying (24.1%), unauthorized or expressly forbidden use (19.1%), incorrect use, misuse, and failure to acknowledge the use of GenAI (18.7%). Based on teachers' responses, to a lesser extent, penalties are also imposed when there is excessive dependence on GenAI or abuse in its use (4.3%). The most common repercussions of the penalty were: failure, task as not submitted or not completed, or no score (50.3%), reduction of the grade (21.7%), repetition of the work submitted (11.9%), penalty depending on the situation (9.1%), and same treatment as copying or plagiarism (2.8%).

The reasons why teachers penalize students are related to the lack of critical thinking or personal reflection (20.2%); lack of authorship, honesty, integrity, citation, non-original work, plagiarism, lack of ethics, cheating or fraudulent use (23.2%); because it goes against the rules or instructions in activities (11.4%); and because there is a lack of effort, creativity, passive attitude, failure to verify information, automatic copying, and misuse of the tool or indiscriminate use (16.8%). Opposedly, regarding the reasons why teachers do not penalize the use of GenAI in education, 11.1% of teachers indicate that it depends on the type of use, and that GenAI is just another tool that can be useful (8.5%). Other reasons for not penalizing the use of GenAI include the difficulty in detecting its use (6.8%), because students need to be familiar with it and learn how to use it (6.6%), because in some subjects its use is not possible or is incidental (5.6%), because its presence is already well established (4.6%), or because it can improve learning (3.6%).

6. Conclusions

The analysis of the university faculty's knowledge, use and stance with regards to GenAI seems to reveal an initial stage of incorporation, marked by the coexistence of interest, uncertainty and the need for training. Although some professors recognize the educational potential of these tools, their practical application is still limited. This section of conclusions highlights some of the most relevant results of the three dimensions of analysis of the implementation of the EdU-P-InA questionnaire.

Firstly, regarding their knowledge, teachers predominantly have a high self-perception of their knowledge of GenAI, since the vast majority of the sample identifies themselves at the two highest levels of the scale. However, these results seem to contradict other data. For example, teachers identify that they know a lot about GenAI, but less than half say they know how to help students use it correctly, be it legally, ethically, safely or confidently. Similarly, although teachers have a high self-perception of their levels of knowledge about GenAI, its use in university teaching is not as frequent as might be expected. Although the sample is divided into similar proportions between those who do use it and those who do not, the most common scenario in all cases is that they never use it. In this regard, it is also worth noting that most teachers do not review or are unaware of privacy, security and ethical issues related to GenAI. According to the study, only a minority review the terms and conditions or know how the data that is entered into the tool will be used and stored, and few are aware of the implications in terms of privacy.

Therefore, there seem to be discrepancies between teachers' self-perception of knowledge and the use they make of it for their university teaching. This could be interpreted to mean that there is much more to learn than teachers believe they know about GenAI tools, or that, despite having a high level of knowledge, this is not necessarily reflected in the use in their teaching practice.

In line with the previous point, it is interesting to contrast the difference in results between the level of knowledge and the level of competence. Although most teachers identify their level of knowledge as being among the two highest levels on the scale, the results are lower when asked about their level of competence in using GenAI in their university teaching. These results reinforce the importance of the concept of *digital competence for teachers*, which goes beyond having conceptual notions about a specific digital tool, in line with Arroyo-Sagasta's (2024) proposal.

In relation to this point, the findings related to the type of training received are also noteworthy. The results suggest that teachers have mainly been trained in instrumental and pedagogical aspects, that is,

they have learned to use specific GenAI tools and to explore how they can be used for teaching. However, technological and reflective training seems to be less common. On the one hand, the lack of technological training seems to be related to the results of the degree of familiarity with technical terms related to GenAI. Teachers are generally more familiar with terms that have been used more frequently (such as prompts) or that they may know from other contexts or tools (such as algorithms); however, they are less familiar with the rest of the terms. In this regard, one of the terms they are least familiar with is hallucinations, with the highest percentage of participants having never heard of it. Nevertheless, this technological concept specific to GenAI tools has particularly important implications for their use.

To give an illustrative example, teachers report that one of the specific tasks they perform with GenAI tools related to teaching is searching for bibliography and references, which is one of the most critical points for GenAI tools in terms of hallucinations. Similarly, teachers indicate that their main strategy for identifying whether students use GenAI tools is the use of detectors. However, the very nature and functioning of GenAI tools means that, at this point in time, it is not possible for another tool to determine with certainty whether certain content has been generated by AI or not. In this regard, the results suggest the need to offer more training opportunities that include technological aspects of GenAI tools, to help teachers understand how this technology works and thus be able to make appropriate and critical use of it. On the other hand, the results also reaffirm the importance of offering reflective training that considers aspects related to the implications of using GenAI tools, how to use them responsibly, and the possible rethinking of teaching in the age of GenAI.

Another relevant point that emerged from the analysis of the results relates to the use –or non-use– of GenAI tools by teachers in university teaching. On the one hand, it is noteworthy that among the most common reasons why teachers do not use GenAI in their teaching practice is that they do not perceive it to be necessary, as well as their satisfaction with other more traditional methods. These results suggest a lack of motivation for change or a lack of adequate training to undertake these changes. As a prospect for future research, it is proposed to studying possible correlations between these variables, with the aim of exploring a possible explanation for the non-use of GenAI tools for teaching. Similarly, the results show that a large proportion of teachers have not made any changes to their teaching, or that the changes they have made have been minimal or insignificant. Thus, it seems like a significant proportion of teachers have not yet reacted to the emergence of GenAI or have not considered that the emergence of these tools implies a change in university teaching in their area of knowledge.

On the other hand, approximately half of the teaching staff say that they do use GenAI in teaching. Nonetheless, when specifically asking about the frequency, the results suggest that the use of these tools is very sporadic. These results seem to indicate that teachers who have used GenAI for their teaching have done so experimentally or incipiently, as these tools do not seem to be incorporated into university teaching on a regular basis. Particularly noteworthy is the limited use in aspects related to assessment, since the results show how GenAI is hardly used to create assessment instruments and, to a lesser extent, to provide feedback and grading. Therefore, the findings seem to highlight the importance of assessment processes in higher education, given the fact that teachers prefer to carry them out without the support of GenAI tools.

Ultimately, certain aspects related to the stance adopted by faculty in response to the emergence of GenAI in the context of higher education are also relevant. Regarding the emotions that this emergence arouses in them, the most frequently cited is concern. Nevertheless, concern is followed by enthusiasm, enjoyment and satisfaction. These results seem to indicate that GenAI in university teaching arouses mixed feelings among teachers. For future research, it would be interesting to explore possible correlations between these emotions and other variables in the usage dimension, to explore potential significant associations between how teachers feel and how they use –or do not use– GenAI tools. With concern being the emotion that GenAI arouses in most teachers, the results suggest that faculty are primarily concerned about students' lack of original work, followed by student plagiarism and the biases inherent in GenAI tools. However, they are less concerned about other aspects related to these tools, such as privacy, their limitations, and ethical issues.

Along the lines of the concerns expressed by teachers, it is noteworthy to highlight the teachers' perceptions of how students interact with GenAI tools, particularly in comparison to their own interaction. Most teachers indicate that they interact with GenAI following processes that indicate a higher level of complexity, including actions such as creating detailed and specific prompts, refining those prompts to obtain better responses, and even modifying the final responses according to their needs. However, most teachers believe that students interact with GenAI tools in a less complex way: "they create a simple prompt and stick with the first response". As a prospect for future research, it is suggested that this data be contrasted with the students' responses (objective 1.4 of the project) to explore possible differences, as well as incorporating some instrument or question that can qualitatively delve into the possible reasons why they believe students interact with GenAI in a simpler way. This

perception could perhaps be a consequence of the fact that GenAI tools tend to be superficial, not necessarily that students interact in this way; or it could be that students do not use GenAI in their work, but are not reaching the level of depth that teachers are looking for; or perhaps it is a prejudice on the part of teachers to think that students do not do better than they do. A logical continuation of the research would be a qualitative study of these perceptions among teachers regarding how students use GenAI.

Also noteworthy are the results regarding the penalization applied to students who use GenAI for academic purposes. Although most teachers do not penalize their students, it is fairly balanced with the group of teachers who do penalize them. Therefore, there seems to be no clear consensus on the dilemma of penalization. On the one hand, those who do penalize students base their arguments on the unethical use of these tools, academic fraud, and a lack of critical thinking on the part of students, among other reasons. On the other hand, those who do not penalize base their arguments on the difficulty of detecting its use, the need for students to learn how to use it due to its ubiquity, and its potential to improve learning, among other reasons. In this regard, it is important to have the support of higher education institutions, which should establish a clear institutional position that can guide teachers in these situations. It is also important that this institutional position is made known to both teachers and students to ensure that both groups are aware of their rights and obligations.

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8. Appendixes

Appendix I. Dissemination of Specific Objective 1.1

This appendix compiles the dissemination actions related to Objective 1.1 of the EdU-InA project. The information has been obtained from the "Dissemination" and "News" sections of the project's official website (https://eduina2427.wixsite.com/edu-ina), where the original materials can be consulted.

EdU-InA Webinars

EdU-InA. (2025, November 19th). *Conocimiento, uso y posicionamiento del profesorado universitario en IAg* [webinar]. Online.

Academic dissemination activities

(2025, November 12th–14th). *El Proyecto EdU-InA: Políticas y prácticas sobre inteligencia artificial generativa en la educación universitaria* [conference paper]. XVIII Congreso Internacional de Organización de Instituciones Educativas (XVIII CIOIE), Universidad Rey Juan Carlos, Madrid, España.

(2025, October 30th–31st). *Inteligencia artificial generativa en docencia universitaria: conocimiento, uso y posicionamiento del profesorado* [conference paper]. 2.º Congreso Internacional de Inteligencia Artificial Educativa (ICEAI), Universidad de Alicante, España.

(2025, October 30th–31st). *Conocimiento, usos y posicionamiento del profesorado universitario sobre la inteligencia artificial generativa: un análisis comparativo por ámbito de conocimiento y género* [conference paper]. 2.º Congreso Internacional de Inteligencia Artificial Educativa (ICEAI), Universidad de Alicante, España.

(2025, October 27th). L'ús pedagògic de la IAg a la universitat [conference]. Jornada Alfabetització en IA a la Universitat, Facultat de Comunicació, Universitat Autònoma de Barcelona (UAB), Bellaterra, España.

(2025, August 27th–28th). *Políticas y prácticas de la inteligencia artificial generativa en la universidad* [conference]. X Congreso en Administración de Oficinas, Universidad Nacional de Costa Rica (UNA), Heredia, Costa Rica.

(2025, August 26th). *Construyendo puentes de investigación: IA y educación superior entre Atlántida y Barcelona* [panel discussion]. 11vas Jornadas Anuales de Investigación, Universidad Atlántida, Argentina.

(2025, July 9th–11th). *Políticas y prácticas de la IA generativa en la educación universitaria* [conference paper]. XIII Congreso Internacional de Docencia Universitaria e Innovación (CIDUI 2025), Facultat d'Economia i Empresa (UB), Barcelona, España.

(2025, June 25th). *Coneixement i ús docent de la IA generativa per part del professorat universitari* [conference paper]. Fòrum Internacional d'Educació i Tecnologia 2025, Universitat de Vic – UCC, Vic, España.

(2025, June 4th–6th). *La IA generativa en las universidades: Oportunidades y retos* [symposium]. Congreso Internacional EDO (CIEDO25), Facultat de Filosofia i Lletres, Universitat Autònoma de Barcelona (UAB), Bellaterra, España.

(2025, January 28th–29th). *Experiencias prácticas de uso de la IA en la docencia universitaria* [conference]. Facultad de Biociencias, Universitat Autònoma de Barcelona (UAB), Bellaterra, España.

News items on our website

EdU-InA. (2025, October 28th). *Ponencia en la Jornada Alfabeen IA a la Universitat* [News item]. https://eduina2427.wixsite.com/edu-ina/post/ponencia-en-la-jornada-alfabetitzaci%C3%B3-en-ia-a-la-universitat

EdU-InA. (2025, September 17th). *Todo preparado para el Webinar 1.1* [News item]. https://eduina2427.wixsite.com/edu-ina/todo-preparado-para-el-webinar-1-1

EdU-InA. (2025, September 8th). *Difusión internacional del proyecto durante el verano de 2025* [News item]. https://eduina2427.wixsite.com/edu-ina/difusion-internacional-del-proyecto-durante-el-verano-de-2025

EdU-InA. (2025, July 13th). *Presentación del proyecto EdU-InA en el XIII Congreso CIDUI 2025* [News item]. https://eduina2427.wixsite.com/edu-ina/presentacion-del-proyecto-edu-ina-en-el-xiii-congreso-cidui-2025

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EdU-InA. (2025, June 10th). *Simposio en el VIII Congreso Internacional EDO* [News item]. https://eduina2427.wixsite.com/edu-ina/simposio-en-el-viii-congreso-internacional-edo

EdU-InA. (2025, June 5th). *Intervención en la VII Jornada de Innovación Docente de la UAB* [News item]. https://eduina2427.wixsite.com/edu-ina/intervencion-en-la-vii-jornada-de-innovacion-docente-de-la-uab

Appendix II. Use of AI in the work process

Following the Artificial Intelligence Disclosure Framework (Weaver, 2024)[1], throughout the work process for objective 1.1, AI was used to support three tasks: 1) Drafting the definitions of technical concepts in the EdU-P-InA questionnaire, 2) Creating Figures 2 and 3, and 3) Translating the report..

1. Drafting the definitions of technical concepts in the EdU-P-InA questionnaire

AI tool: Microsoft Copilot

Purpose of use: Drafting of definitions

Prompts and specific instructions given: "Define the following terms related to generative AI in one sentence with an example"

Use of the generated content: The result was reviewed for accuracy and appropriateness and adopted verbatim in the questionnaire to clarify to participants what each of the related terms meant, including the example provided. Participants were informed that these definitions were developed using Copilot.

Limitations and ethical considerations: No ethical issues or limitations have been identified after reviewing the results.

2. Creating Figure 2

AI tool: Napkin

Purpose of use: Creation of a figure representing the results of the item referring to barriers to the use of AI among teachers.

Prompts o instrucciones proporcionadas: The percentages for each of the barriers were entered into the tool, which automatically executes the command to transform it into a figure.

Use of the generated content: The result was reviewed for accuracy and adequacy and included in the report. The watermark indicating that the figure was created using Napkin was retained.

Limitations and ethical considerations: No ethical issues or limitations have been identified after reviewing the results.

[1] Weaver, K.D. (2024). The Artificial Intelligence Disclosure (AID) Framework: An Introduction. *College & Research Libraries News*, 85(10), 407. DOI: https://doi.org/10.5860/crln.85.10.407

3. Support in the translation of the report

AI tool: Microsoft Word

Purpose of use: Translation of report 1.1 into Catalan, Galician and English.

Prompts and specific instructions given: Integrated AI in the program was used, which does not require specific prompts, but rather through the review-translation tool..

Use of the generated content: The generated content was used as a draft to review and correct errors or misinterpretations made by the program.

Limitations and ethical considerations: No ethical issues or limitations have been identified after reviewing the results.

Appendix III. Example question for expert validation

Question 9 *

11. How familiar are you with these terms related to GenAI? *

	I have never heard about it	I have heard about it, but I don't know what it is	I understand the concept, but I couldn't explain it	I could explain the concept informally	I have knowledge to explain the concept and know how it relates to AI
Prompts	○	○	○	○	○
Hallucinations	○	○	○	○	○
Large Language Model	○	○	○	○	○
Natural Language Processing	○	○	○	○	○
Machine Learning	○	○	○	○	○
Deep Learning	○	○	○	○	○
Tokens	○	○	○	○	○
Algorithms	○	○	○	○	○

	1	2	3	4	5
Univocality	○	○	○	○	○
Importance	○	○	○	○	○
Appropriateness	○	○	○	○	○
Sufficiency	○	○	○	○	○

Appendix IV. EdU-P-InA Questionnaire

Below is the EdU-P-InA questionnaire, which allows for the diagnosis of university professors' knowledge, use, and positioning regarding the use of GenAI in teaching.

If used, referenced or applied, the present report must be cited.

Socio-demographic Data

In which university do you teach? If you teach in different institutions, indicate the institution in which you do most of your teaching. *

Select your answer

In what field of knowledge is your department situated? *

- Arts and Humanities
- Science and Engineering
- Social Sciences and Law
- Health Sciences

Which gender do you identify with? *

- Feminine
- Masculine
- Non-binary
- Prefer not to say
- Other

Indicate your age *

Number must be between 0 ~ 90

Indicate the number of years of **teaching** experience in higher education *

Number must be between 0 ~ 80

Indicate your teaching position *

- ◯ Pre-doctorate contract
- ◯ Post-doctorate contract
- ◯ Teaching assistant
- ◯ Associate professor
- ◯ Tenured professor
- ◯ Catedratic professor
- ◯ Visiting professor
- ◯ Associate professor
- ◯ Substitute professor
- ◯ Other

Knowledge about Generative Artificial Intelligence

How would you define your knowledge regarding Generative AI? *

- ○ I have never heard about GenAI.
- ○ I have heard about AI but I don't know what it is.
- ○ I understand what it is, but I wouldn't be able to explain it.
- ○ I have knowledge to explain it, informally.
- ○ I have knowledge to explain what AI is.

Do you know the difference between Artificial Intelligence (from now on, AI) and Generative Artificial Intelligence (from now on, GenAI)? *

- ○ Not at all
- ○ A little
- ○ Somewhat
- ○ Quite well
- ○ Very well

We invite you to read the definition of both before continuing with the questionnaire:
Artificial Intelligence (AI): This is a field of computer science that focuses on creating systems capable of performing tasks similar to human intelligence and that can improve as they gather information. For example, virtual assistants like Siri or Alexa.
Generative AI (GenAI): This is a subcategory of AI that specializes in creating new content (such as text, images, music, or even code) from existing data. GAI models can generate responses, stories, images, and more, based on patterns learned from large datasets. For example, the Dall-E program creates images that don't exist based on prompts (instructions) regarding what should appear in the image.

Thus, AI focuses on performing automated tasks based on a pre-established program, while generative AI specializes in creating new and original content from existing data and/or data added by the user.

*Definitions developed from the responses of the IAg - Copilot tool

How familiar are you with these terms related to GenAI? *

	I have never heard about it	I have heard about it, but I don't know what it is	I understand the concept, but I couldn't explain it	I could explain the concept informally	I have knowledge to explain the concept and know how it relates to AI
Prompts	○	○	○	○	○
Hallucinations	○	○	○	○	○
Large Language Model	○	○	○	○	○
Natural Language Processing	○	○	○	○	○
Machine Learning	○	○	○	○	○
Deep Learning	○	○	○	○	○
Tokens	○	○	○	○	○
Algorithms	○	○	○	○	○

We invite you to read the definitions of the concepts developed from Copilot before continuing with the questionnaire:
Prompts: Instructions or questions given to an AI model to generate a response. Example: "Write a poem about the sea."
Hallucinations: Incorrect or fabricated responses by an AI model. Example: The AI claims that penguins can fly.
LLM (Large Language Model): AI models trained on large amounts of text to understand and generate natural language. Example: GPT-4.
NLP (Natural Language Processing): Technology that allows machines to understand and process human language. Example: A virtual assistant that answers questions.
Machine Learning: An AI technique where systems learn and improve from data. Example: A system that predicts the weather based on historical data.
Deep Learning: A subfield of machine learning that uses deep neural networks to analyze complex data. Example: Facial recognition in photos.
Tokens: Units of text that an AI model processes. Example: In the sentence "The cat sleeps," "The," "cat," and "sleeps" are tokens. **Algorithms:** Sets of instructions or rules that allow machines to learn patterns from data and generate new and original content. Example: The GPT algorithm is the best-known algorithm that uses a neural network architecture called a transformer to process and generate text.

If you have received training on GenAI, what was it about? *

Check as many options as applicable to your experience.

- [ ] I have not received training on GenAI
- [ ] I have received technical training (i.e. to learn about the technical aspects about GenAI)
- [ ] I have received instrumental training (i.e. to learn how to use a specific tool, such as ChatGPT)
- [ ] I have received pedagogical training (i.e. to learn how to use GenAI for teaching)
- [ ] I have received reflective or debate-based training (i.e. to consider the ethical issues and limitations of GenAI)
- [ ] Other

If you have received training on GenAI, what was it about? *

Check as many options as applicable to your experience.

- [ ] I have not received training on GenAI
- [ ] I have received technical training (i.e. to learn about the technical aspects about GenAI)
- [ ] I have received instrumental training (i.e. to learn how to use a specific tool, such as ChatGPT)
- [ ] I have received pedagogical training (i.e. to learn how to use GenAI for teaching)
- [ ] I have received reflective or debate-based training (i.e. to consider the ethical issues and limitations of GenAI)
- [ ] Other

Does your university offer training about GenAI and teaching? *

- ( ) I don't know if my university offers training.
- ( ) No, my university does not offer training.
- ( ) Yes, my university offers training.

How is the training on GenAI and teaching offered by your university? *

	Totally disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Totally disagree
The training is useful for teaching	○	○	○	○	○
The training is accessible	○	○	○	○	○
There are diverse types of training options (instrumental, pedagogical, reflective...)	○	○	○	○	○
The training options are adequate to the teachers' need (in terms of content, format, schedule...)	○	○	○	○	○

Have you received training about GenAI and university teaching outside from your university? *

Please select at most 3 options.

- ☐ Yes, in other universities
- ☐ Yes, in other institutions
- ☐ Yes, I am self-taught
- ☐ No

With regards to GenAI and university teaching, what would you like / need to receive further training about? *

Enter your answer

Indicate your degree of agreement with the following statement (1-5):"I know how to help my students use GenAI to improve their learning..." *

	Totally disagree	Somewhat agree	Neither agree or disagree	Somewhat agree	Totally agree
ethically	○	○	○	○	○
safely	○	○	○	○	○
confidently	○	○	○	○	○
legally	○	○	○	○	○

Do you have strategies to identify when your students use GenAI? *

- ○ Yes
- ○ No

Which are those strategies? *

Enter your answer

Which of the following statements best represents your level of competence regarding GenAI in teaching? *

From Arroyo-Sagasta (2024)

- ○ My level is very low or nonexistent.
- ○ I am able to understand basic concepts and how GenAI works (what an algorithm is, what training means, what machine learning is, etc.)
- ○ I am able to use GenAI creatively, safely, critically and responsibly to solve problems in my context.
- ○ I am able to apply GenAI in service of pedagogy, with my own perspective on its advantages and disadvantages.
- ○ I am able to develop regulations, protocols and action plans at all institutional levels (macro, meso, and micro) for the use of GenAI.

Use of GenAI for teaching

Do you participate or have you recently participated in any teaching innovation projects related to GenAI in university teaching? *

- ○ Yes, I am a member of the team.
- ○ Yes, I am the principal investigator.
- ○ No.
- ○ No, but we are working on preparing a new project.

Do you use GenAI for university teaching? *

- ◉ Yes
- ○ No

Why do you use GenAI for teaching? *

Enter your answer

Do you use GenAI for university teaching? *

- ○ Yes
- ◉ No

Why do you not use GenAI for teaching? *

Enter your answer

How often have you used GenAI for these parts of teaching? Indicate the frequency considering the last term in which you have taught a course. *

	Never	In some particular lesson	In about half the lessons	In almost every lesson	In all the lessons
Planning	○	○	○	○	○
In-class teaching	○	○	○	○	○
Assessment	○	○	○	○	○
Tutoring	○	○	○	○	○
To do activities with students	○	○	○	○	○

Can you give an example of an activity where you ask students to use GenAI in class? *

If you have not used it with your students, you can answer "No".

Enter your answer

For which of the following teaching purposes do you use GenAI? *

Check as many as applicable.

- [ ] I don't use GenAI for teaching
- [ ] Adapting materials
- [ ] Looking for references
- [ ] Grading
- [ ] Creating assessment instruments
- [ ] Creating assessment activities
- [ ] Creating teaching materials
- [ ] Structuring presentations
- [ ] Structuring and organizing lessons
- [ ] Giving feedback
- [ ] Other

Which changes have you made to your teaching since the emergence of GenAI? *

Enter your answer

Which barriers to the use of GenAI in university teaching have you identified? *

Enter your answer

In the last semester you have taught a course, how often have you used the following GenAI tools for your teaching? *

	Never	Rarely	Sometimes	Usually	Always
Text generation	○	○	○	○	○
Image generation	○	○	○	○	○
Video generation	○	○	○	○	○
Voice/audio generation	○	○	○	○	○
Presentation generation	○	○	○	○	○

How do you interact with text-GenAI tools (i.e. Copilot, ChatGPT...)? *

- ○ I create an elaborate, precise prompt, and usually the first answer seems adequate
- ○ I create a simple prompt and stick to the first answer
- ○ I keep refining the prompts until I obtain a satisfactory answer
- ○ I keep refining the prompts until I obtain a satisfactory answer, and then I modify it according to what I need
- ○ I create a prompt and use the response I get as a basis to modify it according to my needs
- ○ I don't interact with text-GenAI tools
- ○ Similarly as I interact with a browser, using key words
- ○ Other

If you contrast the results you obtain from text-GenAI tools, how do you do it? If you don't contrast, indicate "no". *

Enter your answer

In general terms, how do you think your students interact with text-GenAI tools (i.e. Copilot, ChatGPT...)? *

- ◯ They create an elaborate, precise prompt, and usually the first answer seems adequate
- ◯ They create a simple prompt and stick to the first answer
- ◯ They keep refining the prompts until they obtain a satisfactory answer
- ◯ They keep refining the prompts until they obtain a satisfactory answer, and then they modify it according to their needs
- ◯ They create a prompt and use the response they get as a basis to modify it according to their needs
- ◯ They don't interact with text-GenAI tools
- ◯ Similarly as they interact with a browser, using key words
- ◯ Other

In general terms, do you think your students contrast the results they obtain from text-GenAI tools? *

- ◯ Yes
- ◯ No

Stance

When you use GenAI... *

Check as many options as applicable.

- [ ] I check terms and conditions
- [ ] I am aware of how the data I provide will be used
- [ ] I am aware of how the data I provide will be stored
- [ ] I am aware of the implications for my privacy
- [ ] I am aware of the implications for the privacy of others
- [ ] None of the above

If you had to define in one word how the implementation of GenAI in university teaching makes me feel, it would be... *

Please enter at most 15 characters

Which of these emotions can you relate to with regards to the implementation of Generative AI? *

Check a minimum of 1 emotion, and up to 6 emotions.

Please select at most 6 options.

- [ ] Playfulness
- [ ] Annoyed
- [ ] Anxiety
- [ ] Disgust
- [ ] Enjoyment
- [ ] Arousal
- [ ] Excitement
- [ ] Happiness
- [ ] *Flow*
- [ ] Frustration
- [ ] Dissatisfaction
- [ ] Fear
- [ ] Pleasure
- [ ] Concern
- [ ] Anger
- [ ] Satisfaction
- [ ] Other

How do you see the future of teaching with Generative AI?
*

Enter your answer

Indicate from 1 to 5 your level of agreement with the following statements.
*

	Strongly disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Strongly agree
I am concerned about the risks I am exposing myself to by using GenAI.	○	○	○	○	○
I am concerned about student plagiarism.	○	○	○	○	○
I am concerned about the lack of original work produced by the students.	○	○	○	○	○
I am concerned about the limitations of GenAI.	○	○	○	○	○
I am concerned about the bias of GenAI.	○	○	○	○	○
GenAI is efficient for teaching.	○	○	○	○	○
GenAI is useful for teaching.	○	○	○	○	○
GenAI is efficient for learning.	○	○	○	○	○
GenAI is useful for learning.	○	○	○	○	○

Indicate your level of agreement with the following statement: "Generative AI impacts the teacher-student relationship". *

- (●) Strongly disagree
- ( ) Somewhat disagree
- ( ) Neither agree or disagree
- ( ) Somewhat agree
- ( ) Strongly disagree

Why do you think GenAI has little or no impact in the teacher-student relationship? *

Enter your answer

Indicate your level of agreement with the following statement: "Generative AI impacts the teacher-student relationship". *

- ( ) Strongly disagree
- ( ) Somewhat disagree
- ( ) Neither agree or disagree
- (●) Somewhat agree
- ( ) Strongly disagree

In which way does GenAI impact the teacher-student relationship? *

Enter your answer

Do you ever penalize your students for using Generative AI for their academic work?
*

- (●) Yes
- ( ) No

In which cases do you penalize your students for using Generative AI? What is the penalty?
*

Enter your answer

Why do you think you should penalize your students if they use GenAI? *

Enter your answer

Do you ever penalize your students for using Generative AI for their academic work?
*

- ( ) Yes
- (●) No

Why do you think you should not penalize your students if they use GenAI?
*

Enter your answer

Closure

Do you think you would answer the questionnaire differently if it referred to areas other than teaching (i.e. personal life, research, etc.)? Why?

Enter your answer

What are some needs that you identify in order to incorporate GenAI into university teaching in an ethical, efficient, and equitable manner?

Enter your answer

After answering this questionnaire, do you plan to make any changes regarding GenAI in university teaching from now on? If so, which ones?

If the answer is no, indicate that you don't intend to make any changes.

Enter your answer

Do you have any further comments to add regarding Generative AI and university teaching?

Enter your answer