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Students' Attitudes Towards AI and How They Perceive the Effectiveness of AI in Designing Video Games

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Abstract: The aim of this paper is to find out what the attitudes of higher education students in arts education are towards generative AI and how this relates to their use of it in their academic/professional practice. This is a case study and an exploratory, descriptive and correlational quantitative research study, the methodology of which allows us to determine the vision of the sample of participants in relation to the subject. The design consists of three phases: (1) students complete an Attitude Towards Artificial Intelligence (ATAI) scale; (2) they then create two sketches as a collage of images to be used as visual references for a future digital illustration, one using images from the internet and the other using a generative AI tool; and (3) finally, students complete a questionnaire on their perception after using the generative AI tool used in the activity. The results show significant relationships between attitudes towards AI and perceptions of its effectiveness, efficiency, creativity, and design autonomy. It seems that the attitude with which students approach AI tools is a determining factor when it comes to using them in design tasks and can contribute to quality education.

Keywords: generative artificial intelligence; attitude towards artificial intelligence; arts education; higher education

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1. Introduction

In recent years, the emergence of artificial intelligence (AI) in everyday life has brought great opportunities and promise for the future in disciplines such as medicine, computer science, engineering, biology, neuroscience, and psychology [1]. Following the ideas of several authors, we can define AI as a set of computer systems that perform tasks that simulate human intelligence, such as machine learning, reasoning, perception, natural language understanding, and decision-making, among others [2–4].

AI has been applied in many fields, including sustainable development, and its potential contribution to the Sustainable Development Goals (SDGs) has been recognised [5]. The increasingly common implementation of AI is leading to debates about its use, and to the analysis of societal attitudes and concerns about the impact of this technology on people's lives [6].

Attitudes, perceptions and representations of AI have been the subject of scholarly interest, as reflected in the various works examining attitudes towards the use of AI in fields such as journalism and medicine [7–9], which are generally favourable [10].

Several theoretical models have served as a framework for analysing attitudes towards technology use: the Technology Acceptance Model (TAM) [11], the Unified Theory of Acceptance and Use of Technology (UTAUT) [12], Teo's model [13] and the Diffusion of

Innovation Theory [14], among others. These models alone do not explain the complexity of the factors that influence the use of technology, so it is necessary to use a systemic approach to understand the influence of different variables.

Research along these lines, together with newspaper articles, films, TV series, and literature, paint a heterogeneous picture of views on AI in different psychological dimensions and in the scientific and technological spheres of particular societies [6]. Regarding regionality, a recent report [15] suggests that people in Eastern countries have a more positive attitude towards communicative AI than people in Western countries.

Exposure to technology-related news, science fiction films and literature and personal conversations about technology have been found to be predictors of attitudes towards AI [16]. In terms of socio-demographic factors, the literature suggests that age and gender are not proven predictors of the use of technologies such as ChatGPT [17].

On the other hand, educational level also appears to be associated with more favourable attitudes towards AI, as well as higher income levels [18]. Eurobarometer data show that attitudes towards robots and AI are positively related to prior knowledge of the subject [19]. However, greater knowledge does not always lead to greater acceptance of AI. Some authors [20] point out that when university students train an AI model and are aware of the possible biases that can be generated, they become more critical and negative towards this type of system. The results suggest that while conventional approaches to technology adoption provide relevant information, it is essential to analyse contextual and psychological factors in greater depth [10].

1.1. AI in Education (AIEd)

In the educational landscape, there has been no shortage of alarm bells raised about the potential negative impact on student practice. The emergence of tools such as ChatGPT in November 2022 had a profound general impact, particularly in the educational community [21]. Teachers are concerned about the need for privacy and data security [22] as well as plagiarism if AI is not used responsibly [10,23]. Acceptance of technology in educational contexts is a relevant factor in determining teachers' intention to use digital tools in their teaching practice [24].

After the first bans that appeared a few months after the launch of GhatGPT, there seems to be a consensus in the scientific literature on two immediate actions that needed to be taken in higher education [25]: (1) updating the assessment methods and institutional policies of universities and (2) training teachers and students to respond to the impact caused by this tool. AIEd has undergone several paradigm shifts, from being understood as AI-driven, with the learner as a receiver, to AI-supported, with the learner as a collaborator, to AI-empowered, with the learner as a leader. In general, the trend in the development of AIEd has been towards the latter paradigm, which promotes learner autonomy and personalisation of use [26].

Previous studies have analysed students' attitudes towards AI and found that students, without the guidance of teachers, use AI as a resource for study and text generation, and also see AI as an ally in their learning process [27]. However, students also recognise that many AI applications have flaws in the validity and reliability of the information generated [8,23]. Saude et al. suggest that students with degrees such as computer science may be more likely to use tools that use generative AI, as they are assumed to have a greater interest in using the technology. These students perceive that the use of generative AI has given them more advantages than disadvantages [28]. Recent research identifies several confirmed factors that play a key role in the adoption of ChatGPT in the teaching process, including perceived usefulness, perceived ease of use, trust, social influence, and facilitating conditions. Conversely, it also points to unconfirmed factors, such as

demographic characteristics, extrinsic motivation, and technological readiness, whose effects vary inconsistently across studies [17].

1.2. AI in Higher Arts Education

The generative capabilities of AI tools are transforming creative processes and leading to a reinvention of creativity in many fields, including education [3,29]. Generative AI encompasses a range of algorithms and models designed to create new content by learning from existing data [30,31].

The previous literature on generative AI has analysed the interaction between students and image generation applications to explore how this tool can extend the possibilities of visual creation by improving preliminary sketching [32]. Generative AI has been shown to enhance inspiration in the initial stages of artistic creation, particularly in the sketching phase, through the conceptual exploration and linking of visual stimuli [33], as well as in moments of 'creative block' [34]. In architectural studies, AI is particularly suited to conceptualisation and narrative design tasks [35].

As a contemporary tool, generative AI offers artists unprecedented creativity, enabling new forms of expression through collaboration with machines. It democratises access to artistic creation and fosters a more inclusive environment for diverse voices [36]. However, this technological revolution raises critical issues, such as the erosion of traditional skills, the authenticity of AI-generated works, and the economic implications for human artists. This ambivalence about the use of AI in arts education is echoed in other works, such as that of Hu [37], who examines the role of AI in classrooms from kindergarten to secondary school. He concludes that AI in arts education has the potential to enhance creativity but may threaten the integrity of the learning process.

What does seem clear is that teachers who are informed, knowledgeable, and reflective about the use of AI in the visual arts classroom can enhance students' ability to become familiar with AI-oriented art lessons, methods, and tools [38].

Given the heterogeneity of attitudes towards AI observed in the literature, this paper aims to answer the following research questions:

- What are the general attitudes of students in the Artistic Design in Video Games course towards generative AI?
- Are students' attitudes towards generative AI predictors of whether generative AI will be used more than traditional tools for design tasks?

The main aim of this study is to find out the attitudes of students in the bachelor's course Video Game Design towards generative AI and how this relates to their use of AI in their academic/professional practice. Our hypothesis is that a more positive attitude towards generative AI is associated with a greater willingness to use this tool for design.

2. Materials and Methods

Based on a previous study that aimed to show the current perceptions of educators and master's students in art education courses in relation to generative AI [34], the need to further explore the attitudes of artistic higher education students towards the use of this emerging technology was identified. To this end, this case study of a descriptive and correlational nature was proposed, the methodology of which allowed us to determine the views of the participating sample on the subject. The results of this exploratory study focus on how accessing visual references through generative AI affects the creativity and efficiency of the sketching process compared to the traditional method of searching for images on the internet, thus offering an innovative perspective on the integration of AI tools in the fields of art education and video game design.

2.1. Aims

The main objective of this study was to find out the attitudes of students working towards a Bachelor's in Video Game Design towards generative AI and how this relates to their perception of its use in their academic/professional practice. In relation to the research objective, it is hypothesised that a more positive attitude towards generative AI will be associated with a greater willingness to use this tool in artistic education.

2.2. Sample

The sample that participated in this research was made up of students of the subject 'Artistic Design in Video Games', in the 4th year of the degree in Video Game Design at the University of Burgos; therefore, it was a convenience sample. In total, the sample of this research was made up of 23 people, 14 men (61%) and 9 women (39%), aged between 21 and 44 years (mean (M): 24.04). All participants were informed in advance about the duration of the sessions and the specific requirements of each test. They also signed the informed consent form for their participation in the study.

2.3. Instruments Used

Two instruments were used to collect data in this research. Each is described in detail below.

2.3.1. Attitudes to Artificial Intelligence (ATAI) Scale

The ATAI scale [1], a 5-item measure, was used. Each item is rated on a scale from 0 (strongly disagree) to 10 (strongly agree). The items included in the ATAI scale are listed in Table 1.

Table 1. Items comprising the ATAI scale.

Item	
P1	I fear AI
P2	I trust AI
P3	AI will destroy humanity
P4	AI will benefit humanity
P5	AI will lead to many job losses

The ATAI scale is a short instrument that has a factorial structure with two main components: acceptance (items P2 and P4) and rejection (items P1, P3, and P5), with a negative association between the two. It has been validated in German, Chinese, and British samples [1] and has also been used in a university population in Spain [20].

Cronbach's alpha values were calculated, which were 0.614 for the acceptance component and 0.693 for the rejection component. Both results are close to, but below, the generally accepted threshold of 0.70 for acceptable internal consistency [39].

2.3.2. Questionnaire on the Perceived Efficiency of Using Generative AI

To assess the perceived efficiency of the use of generative AI, an ad hoc questionnaire consisting of 8 items was designed (Table 2), where the degree of agreement with each statement is rated on a scale from 1 (strongly disagree) to 5 (strongly agree).

Table 2. Questionnaire on the perception of the efficiency of the use of generative AI.

Item	
E1	The use of AI has made it possible to achieve the objective of this activity
E2	The use of AI has allowed me to be more effective
E3	The use of AI has allowed me to be more efficient
E4	The use of AI in the second activity has contributed to my learning
E5	Using AI has stimulated my creativity
E6	Using AI has made it more difficult for me to develop my creative skills
E7	AI has enabled me to be more autonomous in design
E8	The final result from the use of AI (2nd activity) has been of higher quality

In order to validate this questionnaire, its reliability was analysed, with a Cronbach's alpha value of 0.842, and an exploratory factor analysis was carried out using maximum likelihood, with a single factor explaining 65.01% of the total variance.

2.4. Research Procedure

The research design was carried out in four phases, between October and November 2024, in order to test the initial hypothesis. Each of these phases is described in detail below.

2.4.1. Stage 1: Application of the ATAI Scale

First, the aforementioned ATAI scale [1] was administered to the participating students.

2.4.2. Phase 2: Practical Experimental Activity

In the context of a practical session about the subject 'Artistic Design in Video Games', students were asked to produce two sketches as a collage of images that could be used as visual references for a future digital illustration. Each of these sketches was produced in timed 20-min sessions.

The experimental practical activity was carried out in two sessions:

- Session 1

Students produced an initial sketch and were able to draw visual inspiration from image searches on the internet.

- Session 2

In this session, students were asked to use a generative AI tool to design the sketch.

The tool chosen for the experimental activity was BlinkShot [40]. This platform allows for the generation of images in real time as prompts or input instructions are modified, providing a potential advantage by providing visual cues quickly and dynamically.

2.4.3. Phase 3: Completing the Questionnaire on the Perceived Efficiency of Using Generative AI

After the practical activity, the students finally completed the questionnaire designed to determine their perception after using the generative AI tool to design sketches in the context of the experimental activity carried out.

2.4.4. Stage 4: Data Analysis and Interpretation of Results

Finally, the statistical analysis of the data obtained was carried out in order to be able to interpret them and draw conclusions. For this purpose, the statistical programme SPSS version 28 [41] was used.

The variables analysed were the items that make up the ATAI scale and the two main components to which these items can be assigned: acceptance (average of items P2 and P4) and rejection (average of items P1, P3, and P5), as well as the items that make up the ad hoc

questionnaire. In order to analyse the reliability of the ATAI scale, Cronbach's alpha was calculated for the two dimensions.

A descriptive analysis was carried out, followed by a check of the normality of the variables according to the assumptions of normality (Shapiro–Wilk), linear relationship, and homoscedasticity.

Non-parametric tests were then used to measure the association between variables (Spearman) and to test for differences between groups (Mann–Whitney U). For all tests, significance levels of $p < 0.05$ and $p < 0.01$ were used.

3. Results

With regard to the ATAI scale, Table 3 shows the descriptive statistics for each item (means and standard deviations) according to the level of agreement (0 being 'strongly disagree' and 10 being 'strongly agree').

Table 3. Descriptive statistics of the scores obtained on the ATAI scale.

Item	Mean	SD
P1	3.91	2.94
P2	5.43	3.33
P3	3.13	3.05
P4	7.43	2.59
P5	6.78	2.09

As can be seen, item P4, 'AI will benefit humanity', had the highest mean score (7.43), followed by item P5, 'AI will cause many job losses' (6.78), item P2, 'I trust AI' (5.43), and item P1, 'I fear AI'. On the other hand, item P3, 'AI will destroy humanity', had the lowest mean score (3.13).

On the other hand, as can be seen in Table 4, if we look at the principal components extracted from the ATAI scale, we see that the component 'acceptance' had a higher mean (6.43) than the component 'rejection' (4.7).

Table 4. Descriptive statistics of the components extracted from the ATAI scale.

	C6 Acceptance	C7 Rejection
Mean	6.43	4.7
SD	2.5	1.87

Table 5 shows the descriptive statistics of the questionnaire on the perception of the efficiency of the use of generative AI according to the degree of agreement (1 being 'strongly disagree' and 5 being 'strongly agree').

Table 5. Descriptive statistics of the questionnaire on the perception of the efficiency of the use of generative AI.

Item	Media	SD
E1	2.83	1.47
E2	3.26	1.42
E3	3.13	1.58
E4	2.22	1.41
E5	2.61	1.37

Table 5. *Cont.*

Item	Media	SD
E6	2.48	1.24
E7	2.57	1.37
E8	3.09	1.62

As can be seen, item E2, 'The use of AI has allowed me to be more effective', had the highest mean score (3.26), followed by item E3, 'The use of AI has allowed me to be more efficient' (3.13). At the other extreme, item E4, 'The use of AI in the second activity has contributed to my learning', had the lowest mean score (2.22), followed by item E6, 'The use of AI has hindered the development of my creative skills' (2.48).

Non-parametric tests (Spearman's Rho) were used to check whether there was a relationship between the different variables analysed (attitude towards AI and perception of the efficiency of its use), after checking the normality of each of them.

No differences were observed in the scores of the ATAI scale according to gender, neither for the component acceptance (U = −0.474; $p = 0.643$) nor for rejection (U = 0.885; $p = 0.403$).

Table 6 shows the correlation coefficients between each of the variables analysed, indicating the level of significance ($p < 0.01$ or $p < 0.05$).

Table 6. Correlation coefficients between the variables of the ATAI scale and the questionnaire on the perception of the efficiency of the use of generative AI.

Item	E1	E2	E3	E4	E5	E6	E7	E8
P1	−0.139	−0.229	−0.213	−0.328	−0.415 *	0.114	−0.287	−0.180
P2	0.403	0.588 **	0.571 **	0.340	0.669 **	−0.239	0.703 **	0.454 *
P3	−0.433 *	−0.446 *	−0.412	−0.559 **	−0.226	0.394	−0.340	−0.301
P4	0.086	0.182	0.303	0.015	0.240	0.041	0.123	0.071
P5	−0.472 *	−0.424 *	−0.360	−0.379	−0.531 **	0.447 *	−0.332	−0.202
C6	0.360	0.567 **	0.567 **	0.298	0.631 **	−0.188	0.634 **	0.402
C7	−0.381	−0.420 *	−0.504 *	−0.621 **	−0.411	0.297	−0.446 *	−0.380

**. Correlation is significant at 0.01 level (bilateral). *. The correlation is significant at the 0.05 level (bilateral).

Looking at the data in Table 6, we can see that the variable P1, 'I fear AI', showed a moderate negative correlation with item E5, 'Using AI has stimulated my creativity' (r = −0.415, $p < 0.05$).

Item P2, 'I trust AI', showed moderate correlation indices with several items of the questionnaire on the perceived efficiency of using generative AI, in particular item E2, 'Using AI has allowed me to be more effective' (r = −0.588; $p < 0.01$), item E3, 'Using AI has allowed me to be more efficient' (r = 0.571, $p < 0.01$), and item E8, 'The end result of using AI was of higher quality' (r = 0.454; $p < 0.05$). This item, P2, also showed high correlations with item E5, 'Using AI has stimulated my creativity' (r = 0.669; $p < 0.01$), and item E7, 'AI has allowed me to be more autonomous in design' (r = 0.703; $p < 0.01$).

As for the variable P3, 'AI will destroy humanity', it correlates negatively and moderately with the following items of the questionnaire on the perception of the efficiency of the use of generative AI: E1, 'The use of AI has allowed me to achieve the objective of this activity' (−0.433; $p < 0.05$); E2, 'The use of AI allowed me to be more effective' (r = −0.446; $p < 0.01$); and E4, 'The use of AI in the second activity contributed to my learning' (r = −0.559; $p < 0.01$).

Regarding item P5, 'AI will cause job losses', it correlates moderately and negatively with items E1, 'The use of AI has allowed me to achieve the objective of this activity' (−0.472; $p < 0.05$), E2, 'The use of AI has allowed me to be more efficient' (r = −0.588; $p < 0.01$), and E5, 'The use of AI has stimulated my creativity' (r= −0.531; $p < 0.01$). There

was also a positive correlation with E6, 'Using AI has hindered the development of my creative skills' (r = −0.447; $p < 0.05$).

If we analyse the results of the association between the components extracted from the ATAI scale (C6 acceptance and C7 rejection) and the items of the questionnaire on the perception of the efficiency of the use of generative AI, the component C6 showed a moderate correlation with item E2, 'The use of AI has allowed me to be more effective' (r = 0.567; $p < 0.01$), item E3, 'The use of AI has allowed me to be more efficient' (r = 0.567; $p < 0.01$). (Table 6). In addition, high correlation indices were found between variable P6 and items E5, 'Using AI has stimulated my creativity' (r = 0.631; $p < 0.01$), and E7, 'AI has allowed me to be more autonomous in design' (r = 0.643; $p < 0.01$), with statistically significant differences.

Regarding component C7, the results showed negative and moderate correlations with variables E2, 'The use of AI has allowed me to be more effective' (r = 0.420; $p < 0.05$); E3, 'The use of AI has allowed me to be more efficient' (r = −0.504; $p < 0.05$); and item E7, 'AI has allowed me to be more autonomous in design' (r = −0.446; $p < 0.01$). Similarly, component C7 had a high correlation with item E4, 'The use of AI in the second activity has contributed to my learning' (r = −0.621; $p < 0.01$), which was also of a negative nature.

4. Discussion and Conclusions

This research collected data on the attitudes towards AI of students of the subject 'Artistic Design in Video Games' in the university degree in Video Game Design and their opinion on how the use of AI can benefit them in performing a task of creating visual references (sketching), compared to other tools different from AI.

In general, the data indicate a higher score for the acceptance of AI component than for the rejection component, which is in line with European studies indicating that the majority of respondents consider that the benefits of science and technology outweigh the harms [28,42], especially in countries such as Spain [15].

Although some respondents indicated a certain fear of the potential dangers of AI to humanity, in line with the Center for AI Safety, which has warned that "this technology could lead to the extinction of humanity" [21] (p. 12), the benefits seem to outweigh the harms.

According to previous work, education levels appear to be positively correlated with accepting attitudes towards AI [18], which is reflected in the results of this paper. Furthermore, the literature suggests that men are more accepting of this technology [18,43,44], although no differences in attitudes towards AI between men and women were observed in our study.

The concern about job loss associated with AI, which is explicit in one of the items on attitudes towards AI, appears in previous research in the field of artistic education, which indicates the fear of students and professionals that certain jobs could be replaced by AI [1], especially in the case of beginners or less experienced professionals [34], such as those who participated in this study.

Regarding the relationship between the attitude towards AI and the perception of its usefulness in the task performed, the results presented reflect significant relationships between the acceptance of AI and the perception of its effectiveness, efficiency, creativity, and autonomy in the design of the sketching task. That is to say, students who accept AI perceive it as helping them to achieve their goal in the specified time (effectiveness) with minimum resources (efficiency), compared to other methods, such as searching for images on the internet.

Students who accepted AI believed that it stimulated their creativity in the visual reference search task, which is consistent with previous studies [32–34], indicating that

generative AI in artistic creation in higher education appears to be useful as a source of inspiration for initial creative tasks, such as the one investigated in the present research. These data support the idea that trust not only improves perceived effectiveness and efficiency but also the ability of AI to foster creativity. As González Alcalde [21] argues, far from being seen as a threat, AI is a tool that can enhance creativity.

Students who are more accepting of AI feel that it enhances their autonomy in design. It is worth exploring to what extent prior knowledge of AI influences acceptance, although we cannot say that greater knowledge leads to greater acceptance [20].

Similarly, the data show some association between a dislike of AI and a low perception of its effectiveness and efficiency for the activity performed. It is worth noting the strong negative correlation between dislike of AI and learning in this particular activity. This confirms that a negative attitude towards AI affects not only the perception of its efficiency and effectiveness but also the perception of its educational impact.

The results show how an aversion to AI seems to limit the appreciation of the efficiency of AI and correlates with the idea that it does not promote self-nomination for work. Furthermore, a negative attitude towards AI is consistent with a low perception of learning in this task, i.e., people who rejected AI believed that it did not contribute to their learning for the visual reference design task.

Taken together, these results support the hypothesis that a positive attitude towards AI maximises its perceived benefits when used in design tasks, particularly in terms of its perceived effectiveness, efficiency, creativity, and autonomy. The data did not indicate that students perceived the use of AI to be associated with higher quality output.

In conclusion, this study shows that students are more accepting than rejecting of AI, emphasising its benefits over potential risks, in line with previous research. Furthermore, a positive attitude towards AI correlates with a higher perception of its effectiveness, efficiency, creativity, and autonomy in design tasks, while rejection limits these perceptions and reduces perceptions of learning. Fostering positive attitudes towards AI in education can increase the acceptance of new technologies, foster innovation in design education, and thus contribute to quality education, as intended by SDG 4, 'Quality Education' [44]. If students perceive AI as a useful and efficient tool, they are more likely to integrate it into design processes that minimise environmental impact. In this way, responsible production and consumption will be promoted, in line with SDG 12, 'Ensure sustainable consumption and production patterns'. However, it is worth noting certain limitations of our study that may have influenced the results. Among them, the scale itself (ATAI), which measures a general attitude towards AI, may not correctly discriminate the diversity of existing AI tools, such as generative AI. In the future, it may be interesting to use more specific measures, such as the TAM questionnaire focused on AI [45], or others applied to the specific context of image and design.

In this research, the Cronbach's alpha values obtained for the acceptance and rejection components of the ATAI scale were 0.614 and 0.693, respectively. Although there is a consensus that an internal consistency value of around 0.70 is adequate and the minimum acceptable level, some authors [46] suggest that in early stages of research or exploratory studies, an internal consistency value of 0.60 may be sufficient. Furthermore, Loewenthal [47] suggests that an internal consistency value of 0.60 can be considered acceptable for scales with fewer than 10 items. Therefore, we can conclude that the values obtained are indicative of the internal consistency of the scale dimensions.

Regarding the research design, this could have had more empirical potential if attitudes towards AI had been measured before and after completing the task, or if participants had been randomly assigned to the internet image search task (condition 1) or to the use of

generative AI (condition 2). Therefore, these limitations should be taken into account when designing similar studies in the future in order to strengthen the experimental design.

As the literature has already shown that the use of AI in initial tasks as a source of inspiration is positive, it could be interesting in the future to explore the use of AI by design students in other more advanced tasks in the creative process and to assess the perception of its efficiency there.

Another limitation is the lack of information in the sample about the students' level of knowledge about AI. Previous studies with pre-university students [15] show a change in perception towards AI, with students tending to be more critical and negative after interacting with AI. For the future, we could investigate the level of knowledge about AI and analyse how this variable influences perception, using tools that measure the level of digital literacy already supported by the literature [45].

It would be interesting to explore future lines of research that explore what lies behind some attitudes or others (fear of possible job loss, fear of lack of regulation, lack of knowledge of the tools. . .).

As for the practical implications of this work, we will divide them into two distinct areas, those that can be carried out by teachers and those that require the agency of university institutions.

First of all, interventions by university teachers in the arts field aimed at reducing fear and rejection, possibly through technological literacy programmes, and promoting the tangible benefits of AI, could play a crucial role in improving its acceptance and effective use. For example, teachers can engage directly with students on issues such as developing a good prompt for more accurate results, exploring the use of different applications for specific tasks, or analysing AI errors to develop students' critical thinking skills. To maintain academic integrity, teachers need to establish clear guidelines, improve classroom assessment, and require reporting on the use of generative AI [23].

On the other hand, academic institutions need to build trust in the technology [17] and update their academic integrity policies to include the use of generative AI tools as a fundamental step in maintaining an ethical academic and professional environment [48]. In addition, universities should provide a technical infrastructure (specialised support services, integration of tools into educational platforms) and use social influence (by disseminating positive user experiences) to support the use of generative AI [17].

Although these findings are difficult to generalise due to the small sample size, they highlight the importance of promoting a deeper understanding of AI in order to optimise its integration in educational and professional contexts.

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Abbreviations

The following abbreviations are used in this manuscript:

AI	artificial intelligence
SDGs	Sustainable Development Goals
TAM	Technology Acceptance Model Unified
UTAUT	Theory of Acceptance and Use of Technology
AIEd	Artificial Intelligence in Education
GPT	Generative Pretrained Transformer
M	mean
SD	standard deviation
ATAI	Attitude towards Artificial Intelligence
P1	I fear AI
P2	I trust AI
P3	AI will destroy humanity
P4	AI will benefit humanity
P5	AI will lead to many job losses
C6	acceptance of AI
C7	rejection of AI
E1	The use of AI has made it possible to achieve the objective of this activity
E2	The use of AI has allowed me to be more effective
E3	The use of AI has allowed me to be more efficient
E4	The use of AI in the second activity has contributed to my learning
E5	Using AI has stimulated my creativity
E6	Using AI has made it more difficult for me to develop my creative skills
E7	AI has enabled me to be more autonomous in design
E8	The final result from the use of AI (2nd activity) has been of higher quality

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