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Artificial Intelligence Ethically in Higher Education: A Case Study on Management Information Systems Students

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Abstract: *This study examines and deeply investigates how university students define and negotiate the ethical use of artificial intelligence in higher education within different pedagogical contexts. Focusing on Management Information Systems students at Karadeniz Technical University, the study explores how artificial intelligence is used in technical, theoretical, and project-based courses and how ethical boundaries are shaped based on usage aim. Using a qualitative case study design, data were collected through semi-structured interviews with undergraduate students and analysed using reflexive thematic analysis. The findings show that students do not evaluate the ethical use of artificial intelligence through fixed rules or institutional prohibitions, but rather through context-sensitive judgements based on learning goals, personal effort, responsibility, and course type. Artificial intelligence is mainly positioned as a technical assistant in programming-related courses, as a cognitive support tool in theoretical courses, and as a creative partner in project-based learning. Ethical concerns emerge when artificial intelligence replaces students' own thinking, creativity, or responsibility. The chapter concludes that the ethical use of artificial intelligence in higher education should be addressed through flexible, pedagogically informed, and student-centred approaches rather than rigid policies, highlighting the importance of shared responsibility among students, instructors, and institutions.*

Keywords: *artificial intelligence in education; ethical AI use; higher education; pedagogical context; generative AI; student perspectives.*

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1. Introduction

1.1. Artificial Intelligence in Higher Education: Opportunities and Emerging Ethical Concerns

Artificial intelligence (AI), especially with the proliferation of generative AI applications, has become a natural part of students' routine academic activities in higher education learning and teaching processes. Students now accept and experience AI not only as a technical tool, but also as an aid that supports thinking, accelerates the learning process, and accompanies project and assignment processes. This transformation, initiated by the use of AI, offers significant opportunities for pedagogical innovations in higher education, and also raises new, uncertain, and complex questions regarding the ethical use of AI. While the extent to which AI supports learning, at what points it begins to replace learning, and how these boundaries should be defined are still unclear, studies in this field have rapidly increased by many institutions and academics. Therefore, ethical discussions regarding AI have become one of the most current and controversial topics in higher education.

Recent studies highlight the potential of AI to support learning in higher education, while some studies also indicate its negative effects. Artificial intelligence-based tools, such as generative AI, offer significant advantages in simplifying and summarising complex information, providing individualised feedback, and adapting to students' learning pace and needs (Vincent-Lancin et al., 2020). In particular, generative AI has begun to be used as a cognitive support element in students' writing, summarising, problem-solving, strategy development, and idea generation processes. This has led to AI acting not only as a learning tool but also as a "cognitive aid" integrated into learning processes. However, these pedagogical opportunities necessitate a rethinking of ethical boundaries.

At the heart of ethical discussions surrounding AI lies how its use transforms concepts of academic integrity, individual creativity, cognitive development, originality, and accountability. The conveniences offered by AI, in some cases, risk reducing students' active participation in the learning process, hindering their creativity, and encouraging superficial learning. Miao and Holmes (2023) point out that the uncontrolled use of generative artificial intelligence in education can weaken critical thinking skills and lead to over-reliance in learning processes. In this context, ethical issues related to artificial intelligence are becoming too complex to be addressed solely through the dilemma of "prohibition" or "permission." A significant portion of current approaches to artificial intelligence ethics in higher education is shaped around institutional policies and general principles.

The European Union's Artificial Intelligence Act addresses the use of artificial intelligence within a risk-based framework, emphasising the principles of transparency, accountability, and responsibility (Act E, 2024). However, such frameworks may be insufficient to directly explain how students experience artificial intelligence in daily academic practice and how they make ethical decisions. Another point increasingly emphasised in the academic literature is that the ethical use of artificial intelligence cannot be considered independently of context and purpose. Selwyn (2024) notes that ethical discussions regarding artificial intelligence in education often remain abstract and generalised, whereas ethical decisions are closely related to classroom practices, purposes of use, types of courses, course aims and outcomes, and pedagogical expectations. Different learning contexts, such as technical, theoretical, and project-based courses, directly influence students' expectations of artificial intelligence and their ethical boundaries. This indicates that the ethical use of artificial intelligence should be addressed not with uniform rules, but with contextually sensitive approaches. In conclusion, artificial intelligence emerges in higher education as both a powerful learning aid and a source of new ethical tensions. Existing studies mostly offer general principles at the policy level or reveal general trends with quantitative measurements. However, how students use artificial intelligence in different course contexts and how they interpret ethical boundaries is still only partially understood. This clearly highlights the need for qualitative studies that examine ethical artificial intelligence use through students' experiences and pedagogical contexts.

1.2. Addressing the Ethical Use of Artificial Intelligence in Education as a Context-Sensitive Process

However, considering students' daily academic activities and learning processes, it is seen that ethical decisions cannot be limited to such fixed frameworks. The use of artificial intelligence should be evaluated based on the specific context, purpose, and extent of its application. In some cases, the use of artificial intelligence creates negative effects for students, while in others it contributes to their development. This shows that the ethical use of artificial intelligence has a context-sensitive structure that cannot be explained by uniform rules (Selwyn, 2024).

The pedagogical context, which will be evaluated with a focus on the purpose of use, plays a decisive role in students' ethical reasoning. The type of course, learning objectives, and assessment methods directly affect how artificial intelligence is positioned. In technical courses, artificial intelligence is mostly seen as a tool that supports problem-solving and debugging processes, while in theoretical courses it can be perceived as an aid that reduces cognitive load and facilitates understanding. In project-based courses, artificial intelligence can be considered as a partner contributing to the creative process. The literature reveals that such pedagogical differences also transform the ethical meanings attributed to technology (Zawacki-Richter et al., 2019, Floridi et al., 2018).

From this perspective, we can evaluate AI as a learning scaffold supporting students in educational settings to understand, organise and process academic activities and content. However, when this support substitutes with a student's own cognitive effort, problem-solving skills and reasoning abilities, this situation turns into cognitive and ethical risks.

Ethical principles and policy documents developed at the institutional level do not always adequately reflect this contextual diversity. International organisations such as UNESCO (Miao & Holmes, 2023) and OECD (Vincent-Lancrin & Van der Vlies, 2020) emphasise responsibility, transparency, and human-centred approaches in the use of artificial intelligence in education, but provide limited guidance on how these principles should be reflected in classroom practices. Policies based on strict prohibitions and limited use of artificial intelligence do not align with students' actual intended uses and can lead to formal compliance problems instead of fostering ethical awareness.

In conclusion, the ethical use of artificial intelligence in education should be considered as a negotiated and contextually sensitive process rather than fixed norms. Students' ethical decisions are shaped by the type of course, pedagogical expectations, learning objectives, individual needs, and institutional guidelines all shape the learning landscape. This demonstrates that ethical AI discussions should prioritise students' real experiences and pedagogical contexts over abstract principles. Understanding how ethical boundaries are established across different course types is crucial for developing more realistic and sustainable ethical approaches in higher education.

1.3. Research Gap and Study Aim

While the current literature offers important frameworks and principles regarding the ethical use of artificial intelligence in higher education, these discussions appear to remain largely restrictive and policy-oriented. Studies on ethical artificial intelligence often revolve around institutional arrangements, general risks, and ideal use principles; how students experience artificial intelligence in daily academic practice and how they make ethical decisions are addressed in a more limited way (Selwyn, 2024). In particular, the issue of how students' ethical reasoning differs according to course types and pedagogical contexts has not been sufficiently clarified. In addition, a significant portion of existing research is based on quantitative surveys and measures students' ethical evaluations through predefined categories. However, the ethical use of artificial intelligence is a dynamic process shaped by students' intentions, efforts, learning goals, and contextual expectations. Therefore, qualitative and contextually sensitive approaches are needed to understand how students negotiate ethical boundaries and the reasons behind the establishment of such boundaries (Zawacki-Richter et al., 2019).

The aim of this study is to examine in depth how Management Information Systems students at Karadeniz Technical University use artificial intelligence in technical, theoretical, and project-based courses and how they define ethical boundaries. The study aims to reveal how students interpret the ethical use of artificial intelligence not through fixed rules, but through the course context, learning objectives, and perceptions of responsibility. In this respect, the research offers a qualitative contribution to discussions surrounding the ethical use of artificial intelligence by focusing on student experiences and pedagogical contexts.

2. Methodology

This study adopts a qualitative case study design to explore how Management Information Systems students use artificial intelligence ethically within different pedagogical contexts and different types of courses in higher education. The aim of this study is to explore the ethical boundaries and context of AI usage among higher education students, with a focus on course types.

A case study approach aims to investigate a contemporary phenomenon in depth within its real-life context (Yin, 2017). From this perspective, the researchers aimed to focus on “how” and “why” questions regarding the ethical use of AI. To explore AI from usage perspective specifically “how”, “in what context”, and “within what ethical boundaries”-research must employ a case study design to reveal the complex, context-sensitive, and subjective meanings inherent in the phenomenon (Creswell & Poth, 2016). In this study, the ethical use of AI was investigated in the course context. According to Holmes et al. (2019), the pedagogical context influences students' ethical decisions based on the use of technology (Holmes et al., 2019). Therefore, this study aims not only to identify an institution, but also to uncover the various micro-connections within that institution. Ethical decisions are boundaries that need to be reconsidered within their context, rather than standard fixed rules (Floridi et al., 2018). Especially in the context of generative AI, students' definitions of ethical violations and their perspectives on ethical situations are shaped more by the nature of the course than by the institutional structure. Survey-based quantitative measurements are not enough to discover and capture these critical details.

2.1. Participants and Data Collection

The interview protocol that was used in this study was constructed and organised around key themes. With this way data collection tool format provided more flexibility for participants to explain and share their ideas and experiences. The participants in this study are eight undergraduate students in the Management Information Systems (MIS) program at Karadeniz Technical University. Participants were selected using a purposeful sampling strategy, which is commonly used in qualitative research to identify individuals who have direct experience with research aims (Patton, 2014). This sampling strategy supplied a comparative point of view of students' ethical AI use between different pedagogical settings and courses within the same institutional context. Data were collected through semi-structured interviews to explore students' ethical use of artificial intelligence across technical, theoretical, and project-based courses. The interviews were conducted during January–February 2026, with eight undergraduate students enrolled in the Management Information Systems program at Karadeniz Technical University. All participants had prior experience using AI tools in different course contexts, which made them suitable for the aims of the study.

This method was chosen because it allows participants to express their experiences and ethical judgements in their own words while maintaining alignment with the study's research objectives (Kvale, 2009).

2.2. Data Analysis

Reflexive Thematic Analysis was used as the main analytical approach to focus on analysing, identifying, and interpreting patterns in the collected data (Braun & Clarke, 2021). Unlike other approaches, this method does not rely on predefined or literature-based codebooks;

instead, it allows themes to emerge organically from interaction with the data. The analytical process was organised into three interconnected phases: preparing the data for analysis, generating and organising initial codes, and constructing and analysing themes. This structure ensured both methodological rigour and analytical coherence while allowing flexibility to capture the context-sensitive nature of ethical AI use.

2.3. Preparing the Data for Analysis

All interview recordings were transcribed verbatim and anonymised using participant identifiers (P1–P8). The transcripts were read repeatedly to develop close familiarity with the data and to gain an overall understanding of how students described their experiences with artificial intelligence across different course types. During this phase, preliminary analytic notes were taken to capture common ideas, contrasts between pedagogical contexts, and early signs of ethical awareness, risk perception, and responsibility attribution. This preparatory stage focused on identifying both clear statements (such as direct ethical judgements) and underlying meanings in participants' narratives, including how learning is described in terms of effort, support, or taking shortcuts.

2.4. Generating and Organizing Initial Codes

After the initial review, the transcripts were systematically coded to generate an initial inductive code list that remained close to participants' language and meanings. Coding focused on segments describing (a) purposes of AI use in coursework, (b) ethical boundaries and justifications, (c) perceived risks and concerns, and (d) responsibility for ethical AI use. Rather than relying on a predetermined coding framework, codes were developed flexibly and refined throughout the analysis as new patterns emerged. To support comparative analysis, each code was examined in relation to course type (technical, theoretical, and project-based), which functioned as an analytical lens rather than a fixed categorical constraint. This process resulted in a comprehensive set of initial inductive codes reflecting both frequently recurring and analytically salient patterns across the dataset (see Table 1). In the reflexive thematic analysis process, a total of 32 first-level (inductive) codes were obtained from the semi-structured interviews.

Table 1. Initial Inductive Code List Derived from Semi-Structured Interviews

Code	Code Description	Illustrative Participant Quotation	Dominant Course Type
AI as code debugger	Using AI to identify, explain, and fix programming errors	"When I get errors in my code and cannot understand why the program is not working, I use AI tools to explain the mistake step by step so that I can understand the logic behind it." (P7)	Technical
AI as concept explainer	Simplifying complex or abstract concepts	"Especially in technical courses, AI explains complex topics in a much simpler way, which helps me understand concepts that I could not grasp during the lecture." (P6)	Technical
AI as learning scaffold	AI as temporary support rather than a replacement	"I do not see artificial intelligence as something that replaces my learning; I see it more as a guide that supports me when I struggle and then I continue on my own." (P3)	All
AI as shortcut	Using AI to save effort or bypass demanding tasks	"If I think a task will not really contribute to my development, I sometimes directly rely on AI without trying too hard myself." (P1)	Technical
AI as productivity booster	Saving time and increasing efficiency	"Using AI saves a lot of time, especially in project-based courses where deadlines are tight and many tasks need to be completed simultaneously." (P1)	Project-based
Course-dependent AI use	AI usage changing according to course type	"I use AI differently depending on the course; in technical courses I focus on debugging, in theoretical	All

		courses I use it for summaries, and in projects I use it for ideas.” (P8)	
Limited AI use in theoretical courses	Reduced AI reliance in theory-heavy courses	“In most theoretical courses, I do not feel the need to use AI much because I can understand the material by studying the notes on my own.” (P1)	Theoretical
Intensive AI use in technical courses	Heavy reliance on AI in programming-related courses	“I almost always use AI in software and coding courses because these courses are very challenging and require constant problem-solving.” (P2)	Technical
AI as creative partner	AI contributing to idea generation in projects	“During project-based courses, AI helps me generate ideas when I feel stuck and cannot think of a creative solution.” (P3)	Project-based
AI as background assistant	AI supporting work behind the scenes	“I feel like AI works in the background as an assistant during projects, helping me when I face difficulties but not fully taking over.” (P4)	Project-based
Ethics as effort	Ethical use defined by personal effort	“If a student puts no effort in at all and lets AI do everything from start to finish, then I think this clearly crosses the ethical line.” (P1)	All
Ethics as intent	Ethical judgement based on user intention	“I think AI use becomes unethical only when there is bad intention, such as trying to deceive others or gain an unfair advantage.” (P2)	Theoretical
Copy-paste as ethical violation	Direct copying seen as unethical	“Using AI is not a problem for me, but copying the output exactly as it is and submitting it as your own work is definitely unethical.” (P5)	All
AI as acceptable support	AI acceptable when supporting learning	“As long as AI supports learning and I reorganise the content with my own understanding, I believe its use is ethical.” (P6)	All
Disclosure-based ethics	Ethical use linked to transparency	“If students clearly state that they used AI and explain how they used it, then I think it can be considered ethical.” (P4)	Theoretical
Fear of dependency	Concern about becoming dependent on AI	“Sometimes I worry that I rely too much on AI and that my own thinking process is slowly disappearing.” (P2)	All
Loss of critical thinking	AI weakening analytical skills	“Getting used to ready-made answers can reduce our ability to think critically and solve problems independently.” (P3)	Theoretical
Homogenization of outputs	Similar answers among students	“When many students use AI, everyone ends up producing very similar answers, just written with different words.” (P2)	Theoretical
Misinformation risk	Risk of incorrect or fabricated information	“AI sometimes gives wrong or even fabricated information, so I never trust the output without checking it.” (P7)	All
Verification behaviour	Checking and validating AI outputs	“I always verify the information I get from AI using other sources because it can easily make mistakes.” (P4)	Technical
AI-enhanced understanding	AI improving comprehension	“AI makes learning easier for me, especially with difficult topics, because it explains things in a student-friendly way.” (P5)	Technical
Selective AI reliance	Using AI only in specific situations	“I try to use AI only when I am really stuck, not for everything.” (P3)	All
Parallel learning strategy	Learning alongside AI	“I first try to solve the problem myself and then compare my solution with AI to see if I missed something.” (P1)	Technical
AI as last resort	AI used when no solution is found	“When I cannot find a solution on my own, AI becomes my last option.” (P3)	Project-based
Reduced self-confidence	Questioning one’s own abilities	“Sometimes I ask myself whether I still have my own ideas or if everything I produce is influenced by AI.” (P2)	Theoretical
Responsibility on the student	Responsibility attributed to students	“I think the responsibility for ethical AI use belongs primarily to the student who chooses how to use it.” (P2)	General
Shared responsibility model	Responsibility shared across actors	“Ethical AI use should be the responsibility of students, instructors, and universities together.” (P7)	General

Need for institutional guidance	Demand for university guidance	“Universities should guide students on how to use AI effectively and ethically instead of banning it completely.” (P1)	General
Skepticism toward strict rules	Doubt about rigid regulations	“Even if strict rules are introduced, I do not think students will fully follow them in practice.” (P4)	Technical
Supportive AI policy preference	Preference for guidance over prohibition	“AI should not be completely restricted; instead, students should be taught how to use it responsibly.” (P5)	General
AI as career advantage	AI seen as a professional asset	“In software-related fields, AI is my biggest supporter and will definitely help me in my future career.” (P2)	Technical
AI-induced job anxiety	Anxiety about employment	“I am worried that AI will reduce job opportunities in the future, especially in technical fields.” (P6)	General
Context-sensitive ethics	Ethics shaped by context	“Whether AI use is ethical or not really depends on the course and the purpose of the task.” (P8)	All
Negotiated ethical boundaries	Ethics as flexible and negotiable	“The ethical boundaries of AI use are not very clear; they change depending on how and why it is used.” (P6)	General

2.5. Constructing and Analyzing Themes

In the final phase, related codes were clustered to construct broader themes that captured shared patterns of meaning in the students’ opinions. Themes were not treated as simple groups of codes but as interpretive ideas that explained how students understood and managed with the ethical use of AI in different learning contexts. During theme development, codes, coded examples, and the full dataset were reviewed repeatedly to make sure each theme was consistent, clearly defined and distinct from the others.

Comparing course types helped illustrate how the same ethical issues appeared differently in technical, theoretical, and project-based courses. The final themes show how the ethical use of AI depends on context and on the interaction between teaching, AI use, and ethical thinking. All original codes were included in the final themes to ensure transparency and consistency. (see Table II).

Table 2. Final Themes and Inductive Codes Related to Ethical AI Use

Final Theme	Theme Focus (Short Description)	Initial Inductive Codes (Full List)
Theme 1: AI as a Technical Assistant	AI is positioned as a problem-solving, efficiency-enhancing, and learning-support tool in technically demanding courses.	AI as code debugger; AI as concept explainer; Intensive AI use in technical courses; AI-enhanced understanding; Verification behaviour; Parallel learning strategy; Selective AI reliance; AI as last resort; AI as productivity booster; AI as career advantage
Theme 2: AI as a Cognitive Support Tool in Theoretical Courses	AI used to support comprehension and cognitive processing while raising concerns about intellectual engagement and originality.	Limited AI use in theoretical courses; AI as learning scaffold; Ethics as intent; Disclosure-based ethics; Loss of critical thinking; Homogenisation of outputs; Reduced self-confidence
Theme 3: AI as a Creative Partner in Project-Based Learning	AI is framed as a collaborative contributor to creativity and project development, accompanied by concerns about balance, dependency, and future work.	AI as creative partner; AI as background assistant; AI as shortcut; Human–AI balance concern; AI-induced job anxiety
Theme 4: Negotiating Ethical Boundaries and Responsibility	Ethical AI is understood as context-sensitive and negotiated through effort, intention, risk awareness, and shared responsibility among stakeholders.	Ethics as effort; Copy–paste as ethical violation; AI as acceptable support; Fear of dependency; Misinformation risk; Responsibility on the student; Shared responsibility model; Need for institutional guidance; Scepticism toward strict rules; Supportive AI policy preference; Context-sensitive ethics; Negotiated ethical boundaries; Course-dependent AI use

Table II presents the complete mapping of all initial inductive codes derived from the interviews (Table I) to the final themes developed through reflexive thematic analysis. All codes are

included without renaming or omission and are assigned to themes based on shared meaning and pedagogical context.

2.6. Study Limitations

This study was conducted with eight students, a small sample, from the Department of Management Information System at Karadeniz Technical University. Given these parameters, the findings must be interpreted strictly within their specific context. This study offers an exploratory qualitative view on how students perceive and negotiate the ethical use of AI in different types of courses, rather than aiming for statistical generalisation through quantitative approaches.

3. Findings and Results

This section presents the findings obtained from the thematic analysis of the interview data. In accordance with the study's analytical framework, the findings are organised around four main themes that reflect how Management Information Systems students use artificial intelligence and how they define ethical boundaries across different course types.

The findings are reported thematically to highlight common patterns across participants rather than individual cases. Each theme represents a distinct way in which artificial intelligence is positioned by students in relation to course type and learning context. For each theme, the analysis focuses on AI usage practices, ethical evaluations, and perceived risks, supported by illustrative participant quotations.

3.1. Theme 1: AI as a Technical Assistant

Across technical courses, students predominantly framed artificial intelligence as a technical assistant that supports problem-solving, debugging, and conceptual clarification rather than as a substitute for their own work. Participants repeatedly described using AI tools to interpret error messages, identify mistakes in code, understand underlying programming logic and complete their technical tasks. As one student explained, "When I get errors in my code and cannot understand why the program is not working, I use AI tools to explain the mistake step by step so that I can understand the logic behind it" (P7). Similarly, AI was described as a means of translating complex technical content into more accessible explanations that complemented classroom instruction, particularly in programming-based courses: "Especially in technical courses, AI explains complex topics in a much simpler way, which helps me understand concepts that I could not grasp during the lecture" (P6). These accounts indicate that students primarily position AI as a supplementary tool in technical contexts that facilitates their learning process.

Students' ethical perspectives on AI use in technical courses were closely linked to effort, understanding code, checking results, and taking responsibility for learning. Students especially emphasised that AI use is considered ethical as long as it contributes to understanding rather than replacing their own effort and cognitive work.

This distinction is evident in statements such as "*I first try to solve the problem myself and then compare my solution with AI to see if I missed something*" (P1) and "*I always verify the information I get from AI using other sources because it can easily make mistakes*" (P4). Conversely, participants identified ethical boundaries being crossed when AI is used as a shortcut that bypasses effort, as exemplified by one student's remark: "*If a student puts no effort at all and lets AI do everything from start to finish, then I think this clearly crosses the ethical line*" (P1). Previous research similarly shows that large language models support learning in technical education while also raising ethical concerns (Kasneci et al., 2023).

In this context, students' ethical views showed that AI is acceptable as a support tool, but perceived as a problem when it reduces active learning and personal responsibility.

3.2. Theme 2: AI as a Cognitive Support Tool in Theoretical Courses

In theoretical courses, students mainly saw artificial intelligence as a tool that helps them understand, summarise, and organise complex or abstract content, rather than do academic tasks for them. Participants claimed using AI more selectively in these courses, and it was not always needed when the materials could be understood through self-study.

As one student stated, *“In most theoretical courses, I do not feel the need to use AI much because I can understand the material by studying the notes on my own”* (P1). When AI was used, it was seen as a temporary support that aided the comprehension of content and tasks without replacing students’ personal effort: *“I do not see artificial intelligence as something that replaces my learning; I see it more as a guide that supports me when I struggle and then I continue on my own”* (P3). This shows that in theoretical courses, students evaluate AI as a mechanism that facilitates cognitive processing and clarifies complex content.

In theoretical courses, ethical views were linked to concerns about critical thinking, originality, and responsibility for knowledge creation. In addition, students often considered AI as a problem when it reduced their critical thinking skills or yielded similar answers. One participant stated that *“Getting used to ready-made answers can reduce our ability to think critically and solve problems independently”* (P3), while another said that *“When many students use AI, everyone ends up producing very similar answers”* (P2). Ethical acceptability was linked not only to intention, but also to personal contribution, transparency and responsibility, as one student mentioned *“If students clearly state that they used AI and explain how they used it, then I think it can be considered ethical”* (P4). These findings are similar to previous research showing that generative AI can help learning in higher education but may also lead to preventing learning and composing weaker thinking skills if used without control and care (Kasneci et al., 2023; Dwivedi et al., 2023). We can say that in theoretical courses, students try to balance using AI as a tool for understanding while rejecting it as a replacement for their own thinking and writing.

3.3. Theme 3: AI as a Creative Partner in Project-Based Learning

In project-based courses, students generally described generative AI as a creative partner that helps support design choices, generate ideas, and speed up development, rather than produce final tasks, homeworks or products.

Students said AI was especially useful when they felt stuck or needed new ideas. *“During project-based courses, AI helps me generate ideas when I feel stuck and cannot think of a creative solution”* (P3). Others evaluated AI as an assistant operating “behind the scenes” during production and refinement: *“I feel like AI works in the background as an assistant during projects, helping me when I face difficulties but not fully taking over”* (P4). This view is similar to the approach of a human–AI creative partnership, where AI acts as a collaborator and partner in the creation process and assisting in generating and revising ideas, especially in projects and open-ended tasks (Creely & Blannin, 2025).

From an ethical perspective, project-based courses raised stronger concerns about authorship, ownership, and dependence, because the final product is closely linked to students’ sense of creativity and main ideas. Students said AI use was acceptable for cooperation or brainstorming or exploring ideas, but became uncomfortable when it reduced their own creative role or made it unclear who owned the main work. Many participants emphasised the importance of responsibility and clear limits, especially the difference between AI as support and AI as replacement.

These concerns match wider discussions about co-creation, authorship, and ownership in the age of generative AI, which highlight the need to rethink academic ethics and clearly explain the role of AI in academic work (Bozkurt, 2024).

In results of study, students' ethical views in project-based learning appear as a continuous negotiation: AI is accepted as a creative partner when human control remains dominant and central, but limited when it threatens originality, responsibility, or the authenticity of the final project.

3.4. Theme 4: Negotiating Ethical Boundaries and Responsibility

Across all course types, students described the ethical use of AI as a flexible and context-based process rather than a fixed set of rules. Students claimed that ethical decisions depend on the purpose of using AI and the degree of personal effort invested. Many students linked ethical use with taking responsibility for their own learning and projects. They noted that the same AI use could be seen as acceptable in one situation but might be problematic in others. Participants often emphasised that ethical boundaries change depending on how AI is used and why it is used. Overall, students focused less on whether AI is used and more on whether it supports learning without replacing personal thinking and responsibility. As one student stated, *"Whether AI use is ethical or not really depends on the course and the purpose of the task"* (P8), while another noted that *"The ethical boundaries of AI use are not very clear; they change depending on how and why it is used"* (P6). Students saw ethical use as depending on effort and ownership of ideas and learning, and strongly condemned the act of copying without personal input. *"Using AI is not a problem for me, but copying the output exactly as it is and submitting it as your own work is definitely unethical"* (P5). Generally we can say that students made ethical decisions by looking at the specific situation and the nature of the tasks, rather than by applying rigid rules.

Many students viewed responsibility for the ethical use of AI as a shared phenomenon between students, instructors, and institutions, although some focused on personal responsibility.

"I think the responsibility for ethical AI use belongs primarily to the student" (P2)—many argued for a shared responsibility model that includes clear institutional guidance: *"Ethical AI use should be the responsibility of students, instructors, and universities together"* (P7). Students did not support strict rules because they felt these rules do not reflect how AI is actually used in practice. They also believed that insufficient rules fail to encourage ethical thinking or the responsible use of AI. *"Even if strict rules are introduced, I do not think students will fully follow them in practice"* (P4).

Instead, students preferred supportive and educational approaches that clearly explain the acceptable use of AI, alongside guidelines that encourage transparency. This view matches current ethical approaches that focus on responsible use, openness, and shared responsibility, especially in education where ethical norms around AI are still developing (Bozkurt, 2024; Floridi et al., 2018). In this perspective, students' reflections show that ethics is not fixed but develops through an ongoing process based on usage aim. Types of courses gain importance at that point; students' views are shaped by the type of course, teaching practices, and the institutional environment. Students also referred to shared understandings about AI use that are still emerging. As generative AI becomes more common in education, these ethical views continue to evolve. In summary, ethics was described as something formed by context, guidance, and everyday learning experiences.

4. Discussion and Conclusion

The educational use of AI is an important matter for students from both a psychological and cognitive perspective. Students' concerns about weakening creativity, critical thinking and problem-solving skills are important points of using AI in an educational environment. Although students perceive AI as a supporting tool, this usage can be problematic at the point of turning into over-reliance.

This can cause a decrease in students' self-regulation, cognitive awareness and critical evaluation of the responses provided by AI. Consequently, the ethical concerns raised by students encompass both academic honesty and the protection of long-term independent thinking and cognitive engagement.

The results of this study also suggest that intuitional approaches should not only focus on a general flexible point of view, but that more concrete, course-sensitive regulations should be applied. This can be achieved through context-based guidelines, as well as targeted training and awareness programmes for both students and academics.

One of the important aspects of this study is that it focuses on students from Management Information Systems (MIS) background. MIS students should have a high technical orientation which means they use AI for problem solving, increasing efficiency and creativity rather than using it purely for content generation. Therefore ethical and cognitive issues should not be evaluated only plagiarism and copyright perspectives. Consequently, the findings of this study must be interpreted within this specific disciplinary context.

The study's results also show that students are wary of rigid and prohibition-based institutional policies, instead finding guiding and educational approaches more meaningful. Students state that ethical responsibility is not solely an individual matter, but a shared structure with faculty and institutions. This finding emphasises that the ethical use of artificial intelligence should be addressed not only through student awareness but also through pedagogical design and institutional guidance. In this context, the most important takeaway for higher education institutions is the development of ethical frameworks sensitive to course types and learning objectives, instead of approaches that completely exclude or unconditionally allow artificial intelligence, and the shaping of these frameworks by responsible faculty members in accordance with their purpose.

Openly discussing the use of artificial intelligence by faculty members and integrating it as a natural part of the learning process will contribute to students establishing more conscious ethical boundaries. In conclusion, this study demonstrates that the sustainability of the ethical use of artificial intelligence is only possible with approaches that centre student experiences, pedagogical context, and shared responsibility, and it provides an important foundation for developing more realistic, applicable, and contextually sensitive ethical policies in higher education.

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