

Exploring the Benefits and Hesitations of Using GenAI for Students in Media Design

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Abstract

The rapid development of AI is well-known within the creative industry; however, the approach to using AI tools in innovative processes and design education remains untested. This study explores the benefits and hesitations of using GenAI for media design students. Focus groups were conducted and analysed with 33 Media Design students, respectively, after one lecture and seven lessons on GenAI. Most students had experience with GenAI before the workshops. After the workshops, students see AI as an assistant during the creative process: a brainstorming tool, an idea reorganiser, and a troubleshooter, resulting in a tailor-made study partner, while showing hesitations toward AI and obstacles to the creative process. Findings offer insights for educators and suggest that future research investigates the teaching approach for AI tools in the media design curriculum.

Keywords: Generative AI, Media Design, Design Education

1. Introduction

AI-generated visual content has seen widespread use in recent years for various purposes (Chaisatitkul et al., 2023). The creative industry has found that GenAI can be adapted to improve the creative process with fewer barriers (Caramiaux et al., 2019; Chaisatitkul et al., 2023). In the educational context, most studies focus on the benefits of GenAI. For instance, it is said to enhance project efficiency and provide an ideal learning path for individual students that suits their learning style and aesthetic (Jin et al., 2024; Lu & Wang, 2024).

Beyond the benefits of using GenAI tools, some researchers note that concerns arise when exploring the role of artificial intelligence in the creative field. These concerns revolve around ethical issues regarding copyright and authorship of AI-generated work (Ivchyk, 2024), as well as workers' displacement through AI automation tasks (Bender, 2024; Jin et al., 2024). Nevertheless, some scholars express concern about craftsmanship, noting a loss of originality (Enache et al., 2024). However, the authors of this study observed that students in Media Design rarely use GenAI tools in the creative process, and there are very few discussions about GenAI in the classroom. This study aims to bridge the knowledge gap regarding future users' concerns about AI tools by exploring

GenAI’s role, benefits, and hesitations for students in Media Design. The findings aspire to provide educators with insights to enhance students’ adaptability to advanced technology in the future of media design education.

To achieve these aims, this study was conducted to answer the following research questions:

- **RQ1:** What role do GenAI tools play in the creative process for Media Design students?
- **RQ2:** What are the benefits and hesitations of using GenAI tools in the creative process for Media Design students?

2. Methodology

2.1 Research Design and Participants

This study adopted a mixed-methods design, combining a quantitative pre-lesson survey with qualitative focus groups, to examine how Media Design students integrate GenAI tools into their creative process and conceptual thinking. A purposive sample of thirty-three Year 3 and Year 4 undergraduate students was recruited to ensure disciplinary consistency and familiarity with production workflows.

2.2 Intervention

To establish a shared foundation of GenAI literacy, the research team coordinated one lecture and seven hands-on sessions across the 2024/2025 academic year. Sessions were led by industry professionals who actively incorporate GenAI into media production, covering applications in 3D character animation, image and video generation, music generation, video editing (DaVinci Resolve 19), and industry-level AI use at Filmart (see Table 1).

Table 1. The delivery method and tools of GenAI in the media design lesson

No.	Lesson’s Topic	Method	AI Tools Introduced
1	Introduction of AI in the media industry	Lecture	Explain the type of AI involved in each process of production.
2	AI in 3D Character Animation (Motion capture, 3D modelling)	Workshop *2	Tripo 3D, Meshy AI, Deep Motion, Wonder Dynamics, Rokoko
3	Image generation and video generation	Workshop *2	Leonardo.ai, Foocus, Stable Diffusion (Comfy.ui), Kling
4	Music generation with AI	Workshop *2	Suno, Deepseek
5	DaVinci Resolve 19: AI-integrated video editing tools	Talk	AI-integrated video editing tools in DaVinci Resolve 19
6	AI in film (AI Hub in Filmart)	Site visit	cineDESK, Deepfake

Note: All workshops provided hands-on tasks. Sessions 5 and 6 were elective events open to voluntary attendance.

2.3 Data Collection

Before and after the sessions, participants completed a structured questionnaire (see Appendix 1) capturing their prior experience, frequency of use, tools employed, and barriers to adoption. Seven focus groups were then conducted, each guided by a semi-structured protocol (see Appendix 2) covering three domains: (1) students' reflections following GenAI instruction, (2) their independent AI use in media design production, and (3) their critical views on AI's potential role in film and animation. All focus group sessions were audio-recorded and transcribed verbatim.

2.4 Thematic Analysis Procedure

Transcripts were analysed thematically using MAXQDA 2020 following a six-phase inductive process. In Phase 1 (familiarisation), two members of the research team read all transcripts independently and recorded initial observations. In Phase 2 (initial coding), both researchers coded the data independently, generating descriptive codes directly from participants' language—for example, codes such as “speeds up research,” “AI as idea generator,” “aesthetic inconsistency,” and “loss of creative ownership.” In Phase 3 (code comparison and discrepancy resolution), the two coders convened to compare their code sets. Discrepancies—instances where the same utterance received different codes—were discussed and resolved through consensus, with reference back to the original transcript to confirm the intended meaning. In Phase 4 (theme development), related codes were grouped into candidate themes using MAXQDA's visualisation tools; codes sharing an underlying conceptual concern were merged into sub-themes (e.g., brainstorming, organising ideas, and technical assistance under the overarching theme of Benefits). In Phase 5 (theme review), themes were reviewed against the full dataset to confirm they were coherent, internally consistent, and grounded in the data. In Phase 6 (theme definition and naming), final themes and sub-themes were defined and named to accurately reflect their analytical content (see Table 2). To further ensure reliability and validity, researcher triangulation was employed throughout: coding decisions were cross-checked between the two independent coders before finalisation. Member-checking was additionally conducted by sharing a summary of preliminary themes with a subset of focus group participants, who confirmed that the themes accurately reflected their expressed views.

3. Results

3.1 Media Design Students' Usage of AI Tools Before the GenAI Tools Lessons

Out of 33 participants, 31 (94%) had prior experience with GenAI tools, while two did not. Most experienced users had used AI tools for between 6

months and 2 years; fewer than half reported frequent use (see Figures 1 and 2). The most common tool category was conversational AI, such as ChatGPT, used by the majority. Fourteen students (42%) had experience with AI art-generation tools like Midjourney and Adobe Firefly, whereas only two participants each had used AI video-generation tools or the AI research platform Perplexity.

Figure 1. Media Students’ experience of AI tools

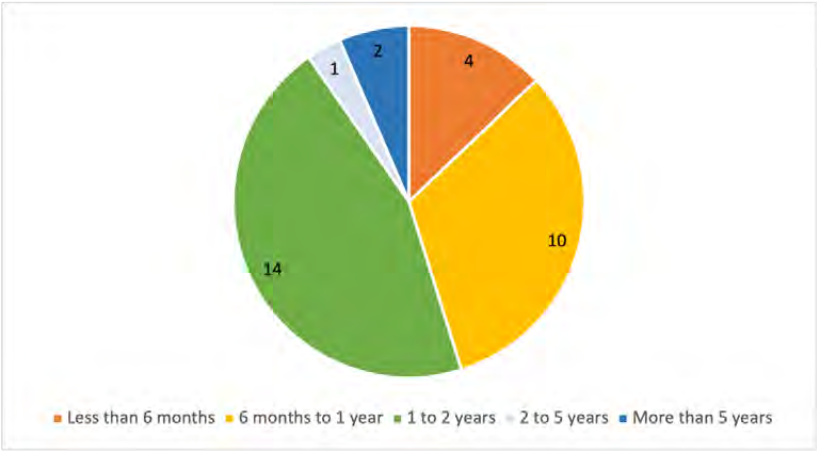
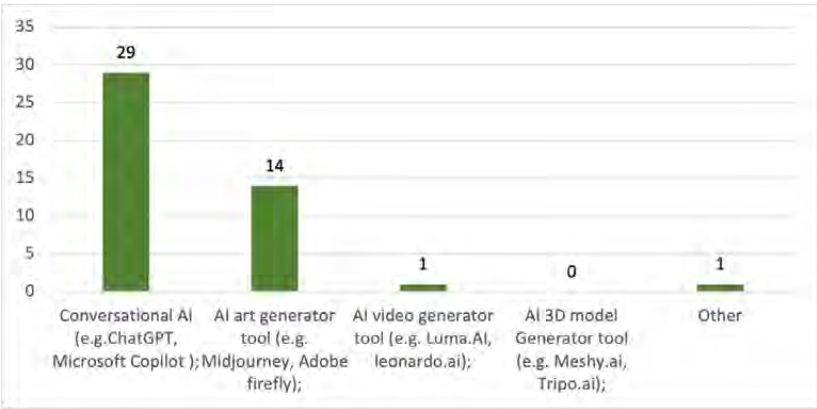


Figure 2. Media Students’ usage of AI tools



These trends are intentional. The widespread use of conversational AI—despite the minimal adoption of AI for video and image creation—indicates a specific limitation within the domain: students see the value of language-focused AI for tasks like scripting and research but have not yet developed effective workflows for incorporating generative visual or video AI into their workflows. As noted in Section 3.2, this foundational understanding influences how students later assess the tools during the workshops.

The primary barriers to AI adoption among non-users were unfamiliarity with available tools and the perception that existing methods were sufficient. One participant also cited complexity and concerns about data privacy and security—a concern that, as we will see, resonated thematically among students who later used the tools.

3.2 Students' Impressions of GenAI Tools After Lessons

The focus group analysis revealed two main themes—Benefits and Hesitations—each with sub-themes based on participants' firsthand experiences with GenAI during production tasks. Importantly, these themes were interconnected and often contrasted, showing that students' relationship with these tools is complex and varies by discipline, rather than simply being acceptance or rejection.

3.2.1 Benefits: GenAI as a Creative Assistant in Pre-Production

Students consistently viewed GenAI as most helpful during the pre-production stage of media design, when they focus on gathering information, brainstorming ideas, and planning the structure before diving into the hands-on work. Three sub-themes characterise this role.

Brainstorming. Students described GenAI as a rapid, low-barrier entry point for gathering background information and perspectives at the start of a project. One participant explained: "I tried to use AI in the Character Design Assignment, and I asked AI about the views on housewives, and I received the result from AI's big data." Another noted: "AI tools can help when we need ideas and information to start a project quickly." This function—using GenAI to surface large bodies of contextual knowledge—was valued specifically because it compressed the early research phase, freeing up time for design iterations.

Organising Ideas. Beyond raw information, students found GenAI useful for structuring and expanding their own thinking. One participant articulated this dynamic particularly clearly: "Sometimes I have messy thoughts, but AI can help me contemplate things I might not have considered before, and it helped me organise my previously chaotic thoughts. Although the results were sometimes too far-fetched, I can adapt them to my own way of thinking. It is a kind of inspiration." Another described using AI as a collaborative scenario planner: "I would ask AI to role-play a character and interact with it to see which scenarios could be adapted to the script." These quotes show that students are not simply accepting AI output passively; instead, they actively compare AI suggestions with their own creative ideas. This interaction is more like a back-and-forth dialogue than just consuming output.

Technical Assistance. Students also appreciated GenAI as readily accessible technical assistance for operating production software. One participant described: “I took a screenshot and asked AI what the next step should be when I want to achieve the style I want. AI provided me with some steps in speed.” Another shared: “I directly asked ChatGPT, and I copied AI’s answer and shared it with my groupmates to test it. The problem was resolved.” In a field where software proficiency is integral to professional identity, students’ use of GenAI to accelerate technical problem-solving reflects a pragmatic and self-directed learning strategy.

3.2.2 Hesitations: Obstacles Rooted in Discipline-Specific Values

While students acknowledged GenAI’s utility in pre-production, their hesitations intensified when they tried to use AI-generated outputs as finished or near-finished creative material. These hesitations are not generic concerns about AI; they are grounded in what it means to practice media design.

Obstacle to the Creative Process. More than 80% of our focus group members considered AI-generated visuals aesthetically insufficient to meet their expectations. This was not just a matter of quality but also highlighted the gap between AI’s uncertain output and the exactness needed in animation and film creation. One student noted: “The image quality that AI generated was fair, but not thrilling.” Another was more pointed: “I do not think Visual GenAI is helpful for 2D animation; in fact, it might increase the time spent revising compared to drawing on my own.” The consistency problem was widely cited: “From our experience using AI, it was inherently inconsistent.” Students highlighted the labour paradox of working with GenAI in animation: “I think the key relies on prompting skill. You might spend much time resulting in useless images, but occasionally, some of the generated images would be ok,” and “If I must go through the details again, I could just draw it myself. When it comes to animation, we probably need to generate hundreds of iterations to achieve the style we want.” These concerns directly account for the low adoption of AI video and image tools seen in the pre-lesson survey: students did not avoid these tools due to ignorance; many had experimented with them and found the output-to-effort ratio insufficient for the precise requirements of animation and film production.

Ethics. Students raised principled concerns about the provenance of AI training data and the ethical implications for working artists. One participant articulated the structural issue: “Most artists have a negative attitude toward AI, as no one would like their secrets exposed and used. After undergoing AI data training, the concept of theft becomes irrelevant.” Another observed: “I believe that people dislike AI primarily due to the actions of its users. Someone would

steal art from a famous artist trained and generate an image to post on social media but did not claim that the image was generated by AI.” A third raised the unresolved legal dimension: “The biggest controversy still revolves around the issue of intellectual property rights—where exactly are they?” These concerns align with broader scholarly debates on copyright and authorship (Ivchyk, 2024), but students articulated them with a personal stake: as emerging designers who will produce original work and enter a labour market affected by AI displacement (Bender, 2024), these questions are not abstract.

Craftsmanship and Originality. The primary concern—particularly unique to media design education—centred on how GenAI might threaten craftsmanship and creative authorship. Students viewed art as a process-dependent and emotionally driven activity. “Art is about personal feelings and the process. If AI is used for everything and the process is overlooked, it raises the question of art’s purpose.” One student foregrounded the irreducible humanity of creative practice: “Even modern art these days, no matter how simple it may seem, is created by humans and involves human emotions.” Another identified the core tension directly: “AI has taken the original creative process, which determines that the work is not based on humanity.” These statements show that students aren’t just concerned about quality or legality; they see GenAI’s involvement in creation as a challenge to what it means to be a designer. In a field where mastering skills like drawing, compositing, and sound design is closely tied to professional identity, this concern is especially significant.

Table 2. Selective data & themes from focus group results

Theme	Sub-theme	Coding unit
Benefit	Brainstorming	“I tried to use AI in the Character Design Assignment, and I asked AI about the views on housewives, and I received the result from AI’s big data.”
Benefit	Brainstorming	“AI tools can help when we need ideas and information to start a project quickly.”
Benefit	Organise ideas	“Sometimes I have messy thoughts, but AI can help me contemplate things I might not have considered before, and it helped me organise my previously chaotic thoughts. Although the results were too far-fetched sometimes, I can adapt them to my own way of thinking. It is a kind of inspiration.”
Benefit	Organise ideas	“I would ask AI to role-play a character and interact with it to see which scenarios could be adapted to the script.”
Benefit	Technical assistance	“I took a screenshot and asked AI what the next step should be when I want to achieve the style I want. AI provided me with some steps in speed.”

Theme	Sub-theme	Coding unit
Benefit	Technical assistance	"I directly asked ChatGPT, and I copied AI's answer and shared it with my groupmates to test it. The problem was resolved..."
Benefit	Technical assistance	"How to easily collect information about arson chemicals that can be found in everyday life, as we found asking others would inevitably lead to problems."
Hesitations	Obstacle to the creative process	"The image quality that AI generated was fair, but not thrilling."
Hesitations	Obstacle to the creative process	"I do not think Visual GenAI is helpful for 2D animation; in fact, it might increase the time spent revising compared to drawing on my own."
Hesitations	Obstacle to the creative process	"From our experience with using AI, it was inherently inconsistent."
Hesitations	Obstacle to the creative process	"I think the key relies on prompting skill. You might spend much time resulting in useless images, but occasionally, some of the generated images would be ok."
Hesitations	Obstacle to the creative process	"If I must go through the details again, I could just draw it myself. When it comes to animation, we probably need to generate hundreds of iterations to achieve the style we want."
Hesitations	Ethics	"Most artists have a negative attitude to AI, as no one would like their secrets to be exposed and used. After undergoing AI data training, the concept of theft becomes irrelevant."
Hesitations	Ethics	"I believe that people dislike AI primarily due to the actions of its users." Someone would steal art from a famous artist to train and generate an image to post on social media but did not claim that the image was generated by AI."
Hesitations	Ethics	"The biggest controversy still revolves around the issue of intellectual property rights—where exactly are they?"
Hesitations	Craftsmanship	"Art is about personal feelings and the process. "If AI is used for everything and the process is overlooked, it raises the question of art's purpose."
Hesitations	Craftsmanship	"Even modern art these days, no matter how simple it may seem, is created by humans and involves human emotions."
Hesitations	Craftsmanship	"AI has taken the original creative process, which determines that the work is not based on humanity."

4. Discussion / Conclusion

This study makes a specific contribution to the field of Media Design education by surfacing the discipline-grounded tensions that undergraduate students experience when engaging with GenAI—tensions that generic accounts of AI in higher education do not capture.

The most significant finding is not that students find GenAI useful or that they have reservations about it: both are well-documented in adjacent fields. The novel contribution lies in the structure of that ambivalence and its roots in the epistemology of media design practice. Students in this study did not resist GenAI due to unfamiliarity; the pre-lesson survey confirmed that 94% had prior experience with AI tools before the intervention. Rather, their hesitations crystallised precisely through hands-on engagement with generative visual and motion AI—tools they had not previously used—and were articulated in terms specific to animation and film production: inconsistency across frames, the iterative cost of prompt refinement, the loss of the embodied making process, and the erasure of authorial identity in the final output.

This discipline-specific dimension advances the existing literature in two respects. First, it extends Enache et al.'s (2024) concern about originality by showing that media design students conceptualise craftsmanship not simply as a quality standard but as a process-constitutive value: the act of drawing, compositing, or sound designing is itself understood as the site of meaning-making, not merely a means to an end. Students' insistence that "art is about personal feelings and the process" and that "even modern art involves human emotions" indicates that their resistance to AI is not conservatism but a principled defence of what defines creative practice in their field. This represents a meaningful departure from findings in architectural education (Jin et al., 2024) and environmental design (Lu & Wang, 2024), where AI-assisted efficiency is more readily embraced, suggesting that the acceptability of GenAI in design education is modulated by the degree to which hands-on craft is central to disciplinary identity.

Second, this study reveals an asymmetric workflow: students are highly receptive to GenAI at the pre-production stage—for research, idea structuring, and technical problem-solving—but reject it as a generator of production-ready assets. This asymmetry has direct pedagogical implications. It suggests that media design curricula should explicitly distinguish between GenAI's role in the conceptual phase and in the craft execution phase and should provide students with frameworks for making that distinction consciously rather than defaulting to either wholesale adoption or wholesale rejection. The ethical concerns

students raised—particularly around data provenance, intellectual property, and the labour implications for practising artists—further underscore the need for a critically mediated pedagogical approach. Students entering the industry will encounter these questions professionally; equipping them to navigate them requires dedicated curriculum time for critical AI literacy alongside technical workshops.

Taken together, these findings argue that media design education should position GenAI as a phase-appropriate, critically mediated tool: valuable as a pre-production thinking partner, but requiring explicit pedagogical scaffolding around its limitations and its relationship to creative authorship. Future research should investigate specific instructional strategies—such as structured reflection tasks, portfolio documentation of AI-assisted versus hand-crafted work, or curriculum frameworks that embed AI ethics alongside production practice—that support students in developing a grounded and critical relationship with GenAI in media design.

Ethical Declaration Statement

The project has been approved by the PolyU Institutional Review Board (PolyU IRB) (or its Delegate) of The Hong Kong Polytechnic University. (Reference Number: HSEARS20240903006).

Generative AI Policy

The author(s) used Google NotebookLM during the preparation of this work to do general research and assist with focus group results. After utilising the tool/service, the author(s) thoroughly reviewed and edited the content as necessary and assumed full responsibility for the publication's content.

References

- Bender, S. (2024). Generative-AI, the media industries, and the disappearance of human creative labour. *Media Practice and Education*, 26(2), 200–217. <https://doi.org/10.1080/25741136.2024.2355597>
- Chaisatitkul, A., Luangngamkhum, K., Noulpum, K. et al. The power of AI in marketing: enhancing efficiency and improving customer perception through AI-generated storyboards. *Int. j. inf. tecnol.* 16, 137–144 (2024). <https://doi.org/10.1007/s41870-023-01661-5>
- Enache, I. C., Valter, N. E., Răduică, F. F., & Chivu, O. R. (2024). Integrating Artificial Intelligence into the Photographic Design Process. *Journal of Industrial Design and Engineering Graphics*, 19(1), 143–148. <http://sorging.ro/jideg/>

- Ivchyk, V. (2024). Overcoming Barriers To Artificial Intelligence Adoption. *Three Seas Economic Journal*, 5(4), 14-20. <https://doi.org/10.30525/2661-5150/2024-4-3>
- Jin, S., Tu, H., Li, J., Fang, Y., Qu, Z., Xu, F., Liu, K., & Lin, Y. (2024). Enhancing Architectural Education through Artificial Intelligence: A Case Study of an AI-Assisted Architectural Programming and Design Course. *Buildings*, 14(6), 1613. <https://doi.org/10.3390/buildings14061613>
- Lu, M., & Wang, H. (2024). The practice and reflection of generative AI in the cultivation of aesthetic education in colleges and universities: centred on environmental design major. *MATEC Web of Conferences*, 395, 01021. <https://doi.org/10.1051/mateconf/202439501021>
- OpenAI. (2019, November 5). GPT 2: 1.5B release. <https://openai.com/index/gpt-2-1-5b-release/>
- Yadav, N., Sharma, L., & Dhake, U. (2023). Artificial Intelligence: The Future. *International Journal Of Scientific Research In Engineering And Management*, 07, 1–10. DOI: 10.55041/IJSREM27796.

Appendix (1) Pre-lesson AI Usage Research

Name of participant: _____

I have read and understand the above consent form. By clicking the “Next” button to enter the survey, I indicate my willingness to voluntarily take part in this study.

☐ Agree ☐ Disagree

Gender: ☐ Male ☐ Female

Which year are you in? ☐ Year 3 ☐ Year 4

Have you ever used any AI tools in your studies? ☐ Yes ☐ No

How often do you use AI tools?

☐ Rarely ☐ Sometimes ☐ Often ☐ Always ☐ Daily

What kind of AI tools did you use? (Multiple Choice)

- ☐ Conversational AI (e.g., ChatGPT, Microsoft Copilot)
- ☐ AI art generator tool (e.g., Midjourney, Adobe Firefly)
- ☐ AI video generator tool (e.g., Luma.AI, leonardo.ai)
- ☐ AI 3D model Generator tool (e.g., Meshy.ai, Tripo.ai)
- ☐ Other: _____

How long have you been using AI tools?

- ☐ Less than 6 months
- ☐ 6 months to 1 year
- ☐ 1 to 2 years
- ☐ 2 to 5 years
- ☐ More than 5 years

Why haven't you used AI before? (Multiple Choice)

- ☐ I haven't had the opportunity to try AI tools.
- ☐ I find AI tools are hard to access.
- ☐ I'm not familiar with how it works or its applications.
- ☐ I haven't felt the need to use AI tools as my current methods get the job done effectively.
- ☐ I haven't felt confident enough to start using them as AI tools are too complex for me.
- ☐ I find AI tools are not affordable to me.
- ☐ I have concerns about data privacy and security when using AI tools.
- ☐ I don't know which AI tools fit my production style.
- ☐ I never hear about AI tools.
- ☐ Other: _____

- End of questionnaire -

Appendix 2 Focus Group Questions

General: What is the AI using habit in this year? Any changes?

Section 1: Student's thoughts after attending lessons integrated with AI

- 1.1 How did the AI-integrated lessons change your understanding of AI's role in production?
- 1.2 Did AI enhance or hinder your learning experience? Why? In which way?
- 1.3 Would you like future lessons to incorporate AI? What specific AI features would you want to explore?
- 1.4 Additional thoughts on AI-integrated lessons.

Section 2: Student's off-lesson usage of AI in film / animation production

- 2.1 Apart from experiencing AI tools on lessons, do you explore/use AI tools in your creative process/production process?
- 2.2 If yes, what AI have you been using so far?
 - 2.2.1 At which stages of your workflow do you apply AI?
 - 2.2.2 What percentage of your creative process involved AI? Can you walk us through your creative process?
 - 2.2.3 How does AI affect your creative process?
 - 2.2.4 Does AI reply with unexpected answers? How can they inspire you? (Example, please.)
 - 2.2.5 What motivates you to use AI more frequently? (Pros)
 - 2.2.6 What hinders your experience on using AI? (Cons)
- 2.3 If no, what is the reason(s) affecting you not to use AI?
 - 2.3.1 What would motivate you to start using AI tools?

Section 3: Critical thinking

- 3.1 How would you rate the accuracy of AI-generated content in your field? What factors determine this? (e.g., relevance, factual correctness, contextual understanding)
- 3.2 What criteria do you use to evaluate whether AI-generated content is truly useful? (e.g., time saved, creativity boost, error reduction.)
- 3.3 How do you assess the practical value of AI-generated content in your workflow? Does it align with your initial expectations?
- 3.4 **Verification Practices**
 - Text: Do you routinely fact-check or edit AI-generated text (e.g., scripts, reports)? If so, how?
 - Visuals: How do you validate the accuracy of AI-generated visuals (e.g., reference comparisons, expert review)?

-End of Focus Group Questions-