



# Encuesta de investigación para explorar las percepciones y prácticas de estudiantes de diseño industrial de la Universidad Autónoma Metropolitana, Unidad Azcapotzalco, sobre el uso de la inteligencia artificial en los procesos de diseño.

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This questionnaire was designed to explore the perceptions and practices of industrial design students regarding the use of artificial intelligence systems in creative processes. The instrument consists of 12 items: one 5-point Likert-scale question, eight multiple-choice questions, and three open-ended questions. It was administered to a sample of 66 undergraduate Industrial Design students in a university academic context. The questionnaire enables the analysis of both quantitative and qualitative dimensions, providing empirical evidence on the integration of AI into design education.

**Research survey to explore the perceptions and practices of industrial design students, regarding the use of artificial intelligence in design processes.**

N.	Question	Answer options
Q1	Have you used AI to generate designs?	Yes, No
Q2	Which of the following generative AI image platforms do you have experience with? (You may select more than one)	Midjourney, DALL-E (2, 3 or higher), Stable Diffusion, Adobe Firefly, Leonardo.Ai, Copilot, Gemini, Meta, ChatGPT, Other(s), None
Q3	When creating a prompt (instruction) to generate the image of a product, which of the following elements do you consider essential to obtain a good initial result?	a) Only the product name (e.g., “futuristic chair”), b) The product, descriptive adjectives, and visual style (e.g., “an ergonomic minimalist office chair, photorealistic render”), c) A very long poetic description without technical details, d) I’m not sure, e) None
Q4	Which technique do you most frequently use to refine or improve an AI-generated image that does not meet your expectations?	a) Generate the same image repeatedly without changing the prompt, b) Modify and add detail to the original prompt using weights or more specific terms, c) Use functions such as “inpainting” (edit part of the image) or “outpainting” (expand the image), d) Discard the image and start from scratch with a completely new idea, e) All of the above, f) None of the above
Q5	On a scale from 1 to 5, how comfortable do you feel guiding AI to generate images with a specific aesthetic (e.g., analog style, designer sketch, claymation, Keyshot-type render)?	Likert scale: 1 Not comfortable – 5 Very comfortable
Q6	Imagine AI generates a product concept that is almost perfect but has obvious errors in small details (e.g., incorrect joints, misplaced buttons). What would be your next step?	Try to correct it with a more precise prompt, Export the image to editing software such as Photoshop or Illustrator to correct it manually, Use the image only as inspiration and model the concept from scratch in 3D software, Discard the image due to imperfections, Leave it as is and present it
Q7	In which phase of the industrial design process do you think generative AI images add the most value? Why?	Open-ended response
Q8	Are you aware of the biases that generative AI models may have (e.g., cultural, gender, aesthetic biases)?	a) Yes, and I try to counteract them in my prompts, b) Yes, but I’m not sure how to address them, c) No, I hadn’t considered this problem
Q9	In terms of intellectual property, what do you think is the current status of the images you create with generative AI?	a) They are completely mine and I own all copyrights, b) The rights belong to the company that developed the AI, c) It is a legal gray area and depends on the platform’s terms of service and local legislation, d) I’m not sure
Q10	Have you used negative prompts (telling AI what NOT to include) to improve the quality of your images?	a) Yes, I use them regularly to remove unwanted elements and improve coherence, b) I have used them a few times but don’t fully understand their impact, c) No, I have never used negative prompts
Q11	When you finish creating an image with the help of AI, do you feel the same as if you had made it by hand? Why?	Open-ended response
Q12	Briefly describe the prompt you would use to generate a visual concept for the following product: “A smart home water dispenser made with recycled materials, with an aesthetic inspired by nature (biomimetic).”	Open-ended response