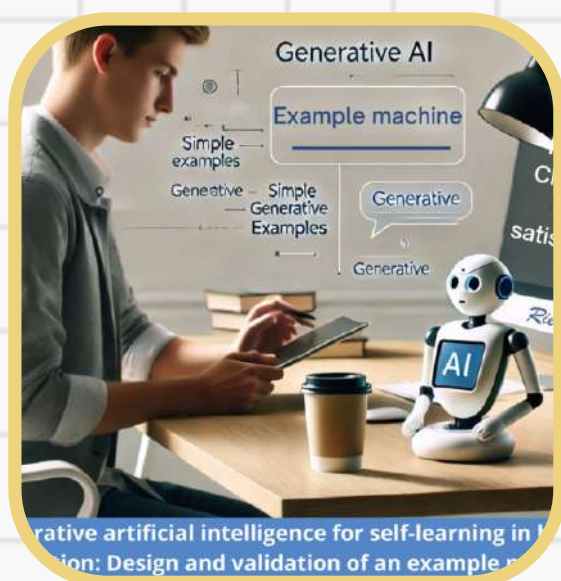


# Generative artificial intelligence for self-learning in higher education: Design and validation of an example machine

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## Generative AI

Generative Artificial Intelligence (AI), as an emerging and disruptive technology, has revolutionised human-machine communication. This new means of interacting with electronic devices has opened up interesting possibilities in the educational field.

## Example machine

The objective of this study was to analyse the effectiveness of interactive and practical example-generating machines developed by generative AI for the study and review of content in university education.



## ChatGPT

Using an evaluative research approach, a process of design, validation, and pilot implementation of four prompts developed by the ChatGPT tool was implemented. After designing each prompt, its functionality was validated by three expert judges who applied a systematic testing process.

## The prompts

The final prompts were piloted on a sample of 192 students with education sciences degrees, who evaluated the usefulness and their overall satisfaction with the example-generating machines based on scales validated in previous studies.



## Simpler prompts

The testing results revealed better performance of the example-generating machines with simpler prompts. Moreover, the students indicated very high satisfaction with the machines along with a high perception of their usefulness.

## Results are promising.

Specifically, while women showed higher perceptions of usefulness than men in a few of the measured indicators, the perceived usefulness was generally higher in the groups of students in which the machine committed errors during the pilot. Despite the limitations of the tool, the results obtained are promising.

