

# AI-Powered University Evolution: A path towards the academic future

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The integration of generative artificial intelligence (genAI) in universities of applied sciences seems to have a great potential, promising new opportunities and benefits for both students and staff. Administration processes and research can be optimized, as well as a significant value can be added to the teaching programs. The questions that have to be answered now are: how to implement this innovative tool and what are the challenges of this integration?

## Introduction and Objectives

With the arrival of the 4th technological revolution, the smart devices and genAI take the lead at the innovation field. Universities are also influenced by these new technologies, and stakeholders claim them to be updated. This thesis aims to create the basis for the integration of genAI in the different aspects of the university, which are administration, research, and academic programs, focusing primarily on the last one. There, different roles for the genAI (Figure 1) in university classes will be demonstrated, providing examples of applications and the value those create for both students and lecturers. It is also the intention to understand the current applications of genAI in universities as well as to obtain the stakeholders opinions, fears, and expectations. Finally, the potential pathways for the future development of this new technology will be set.

## Research Design

The first part was the literature review which reviewed existing methods of genAI application and experiments to create a base of knowledge to build on. Then, empirical data was gathered by conducting expert interviews with stakeholders in the university realm, collecting their opinions, expectations, fears, and considerations of the integration of genAI in the academic programs. Additionally, previous experiences, and new ideas and suggestions of the different ways people use genAI in class were collected.

## Results

Previous studies have been conducted, indicating various applications of genAI and showing the potential that it has. However, the lack of rigorous experiments points the need for proving the methods proposed. The results of the interviews indicate that the use of genAI is already present in the different aspects of an university, but as a help to the individual tasks of the university staff. It is not yet included in official processes.

In the academic programs, lecturers strive to learn as quickly as possible to provide good content to students and to put them on their main focus. On the other hand, students have seemed to find the perfect individual lecturer, who creates personalized guidance through the content of the modules. However, a general concern about ethical issues is spread over the interviewees.

## Implications and Recommendations

Despite all the benefits genAI seems to bring to universities and the willingness of the stakeholders to apply it; the lack of experiments to prove its utility in the existing literature, and the ethical implications, where the limitations are not drawn yet, a framework of uncertainty is created, which does not allow genAI yet to be officially integrated in the university's processes. It will also be a task for the future to raise awareness among the population about the use of genAI and the limits that should be set.



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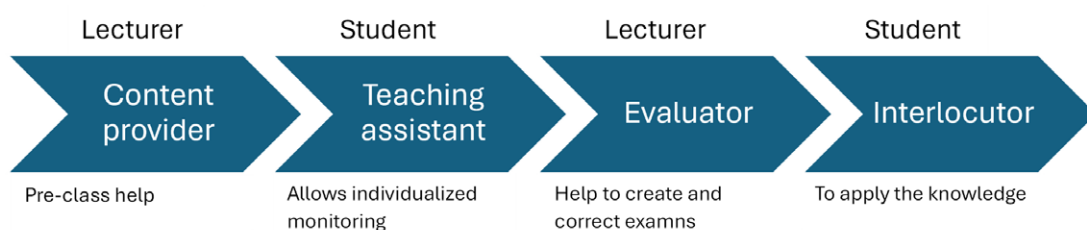


Figure 1: Value chain of the integration of AI in classes, with their roles and respective beneficiaries