DESIGNING FOR THE FUTURE OF SECONDARY EDUCATION

While many students are already using ChatGPT to help them with their schoolwork, even to the extent of having ChatGPT write reports for them, the debate about whether students should have access to ChatGPT in secondary schools is still ongoing. Despite resistance from educational staff, ChatGPT is now firmly established in secondary schools and cannot be ignored. Therefore, this project aims to explore **how Generative AI has been adopted in secondary education and how we can design facilitate this adaptation process**.

Problem Statement

"Teachers **need to develop knowledge and experience of GenAI** in order to educate their students about it in the classroom. Currently, this is not being done due to their demanding schedules and unclear guidance from their management, resulting in students not being shown how to critically use GenAI".

Design Statement

"In a world undergoing digitalisation, I want teachers to engage in **social interaction** with students while acquiring **Generative AI knowledge and experience**."

Make both students and teachers aware of the following risks:

Generative AI has an impact on privacy

Any information you share with generative AI programmes, such as ChatGPT, is used to improve the programme. So don't share information you don't want to make public.
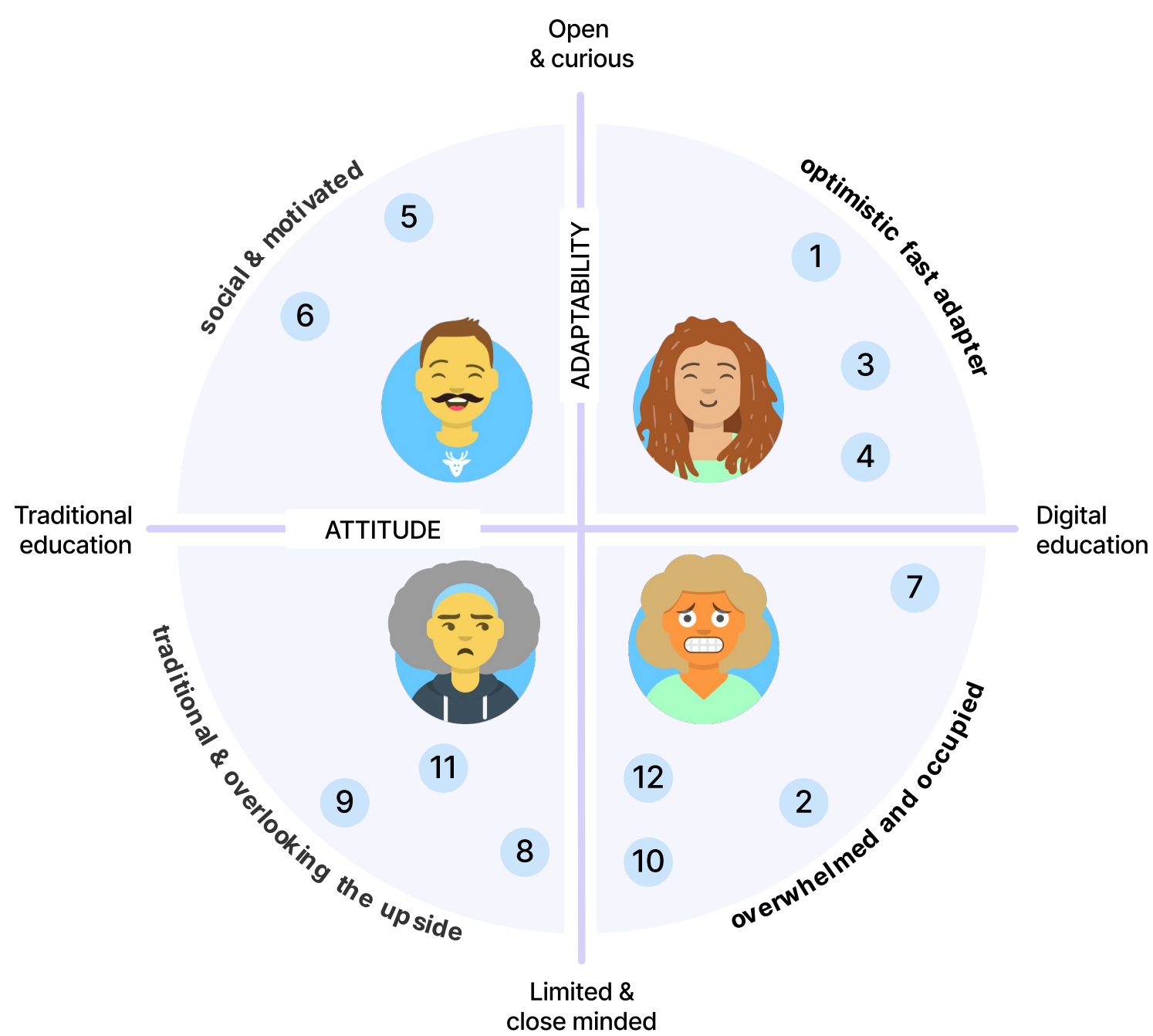
Generative AI makes mistakes

Generative AI can sometimes get it wrong and then write a text with information that is incorrect. Always check the outcome.

Generative AI has a bias

Generative AI has a bias because it is trained on data created by humans. So content created by generative AI will have this bias.

Framework of the four mindsets of teachers

1	Adapting to the digital generation	7	Good mental health is fundamental for a good relationship with AI
2	The negative influence of technology on schoolwork	8	Fear of the unknown in AI
3	Making education more dynamic through the use of AI	9	We like the way things are
4	The power of AI-enabled personalised online education	10	The pressure to perform keeps building
5	The opinion of the teacher matters	11	A need for tech-savvy teachers but no supply
6	The classroom as an important driver for social contact	12	Adopting digital skills requires effort and time

The understand the future context of secondary education, the Vision in Design (ViP) approach by Hekkert and van Dijk (2011) was used. The framework above was developed focusing on four different mindsets that teachers may have. The blue dots are the driving forces of the future context. The focus during this project was on the social and motivated mindset. Teachers with this mindset are motivated and open to new approaches if they improve their work or if it benefits the students. However, it's important to recognise a significant constraint: teachers face demanding schedules and have limited time to engage with new topics such as GenAI. This limitation must be taken into account when designing interventions or educational materials aimed at this audience.
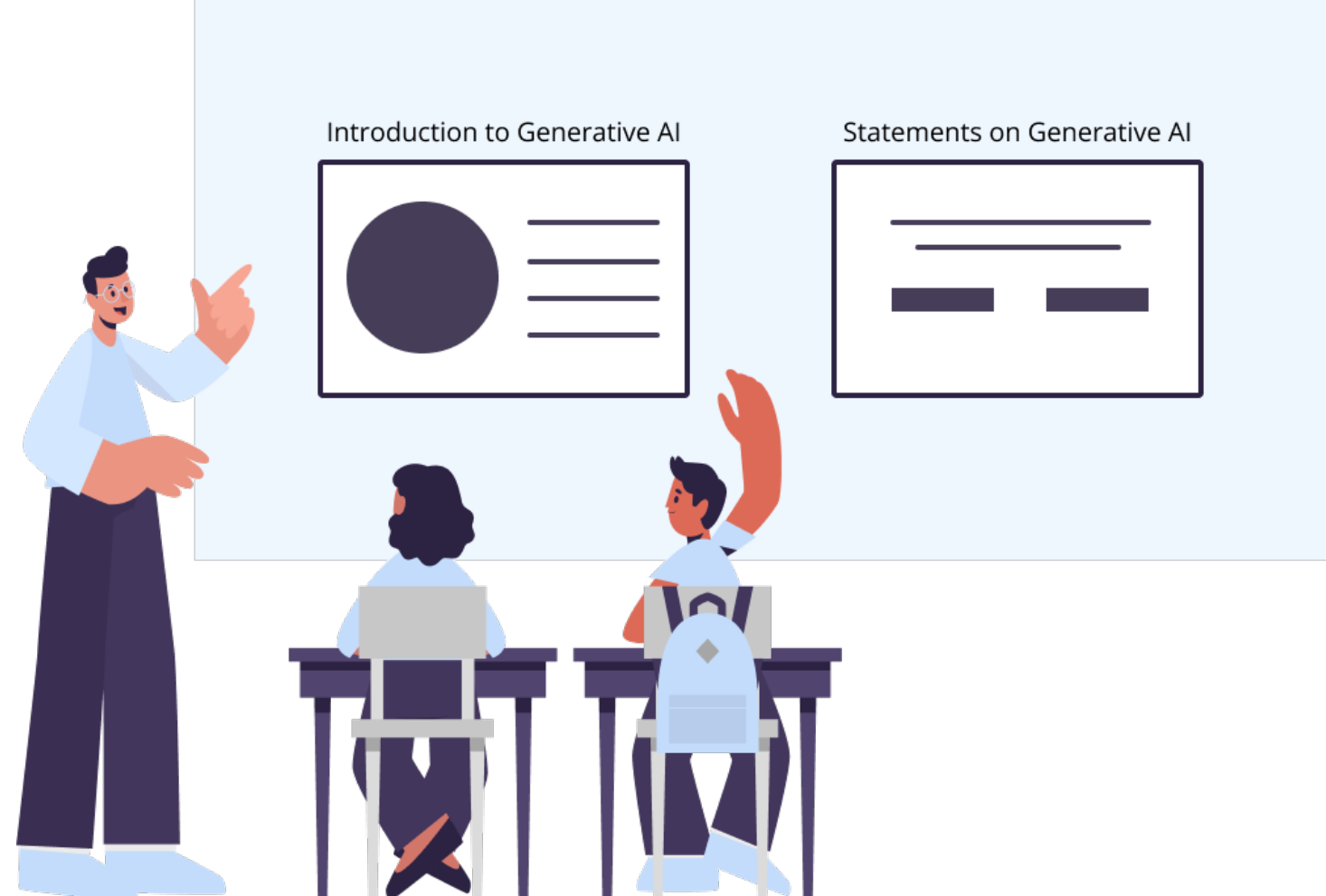
Two functioning prototypes

Two functional prototypes were developed and tested, yielding positive results. These prototypes include **a lesson module and an informative website dedicated to GenAI**. Both initiatives are designed to assist teachers by offering resources for personal and classroom use, thereby reducing the time spent searching for appropriate tools or information on GenAI and easing the transition into utilizing GenAI.
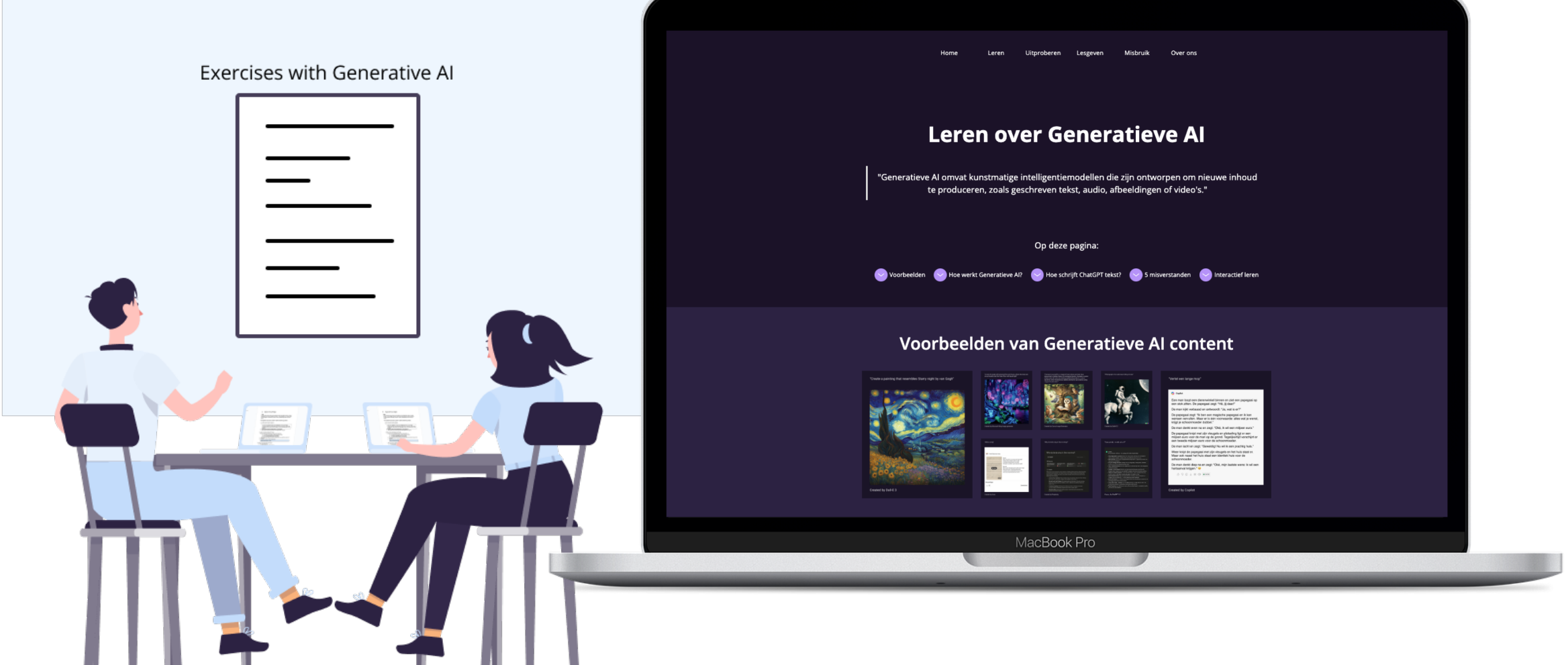
The lesson module serves as a catalyst for dialogue between teachers and students, fostering an environment where students can share their insights and experiences, while teachers reciprocate by sharing knowledge on GenAI. The module also includes exercises that explain the value prompting and explore the opportunities and risks associated with GenAI, encouraging critical and responsible use of GenAI. The website acts as a platform with knowledge on GenAI, with explanatory YouTube videos, illustrative examples and practical guidance on how to use GenAI tools.

The enthusiastic response from teachers to both the teaching module and the website is testament to the success of these approaches. This positive feedback indicates that the concepts have effectively addressed the needs and expectations of teachers, establishing them as valuable tools for enhancing teaching and learning experiences related to GenAI.

Part 1: Acquiring the Generative AI knowledge

Part 2: Gain experience and criticism on Generative AI

Jeltje Tammsa
Designing for the future of secondary education
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Msc Design for Interaction

Committee   Dr. Cila, N. (Nazli)
                 Dr. Lomas, J.D.
Company   SCO Delft | Christelijk Lyceum Delft
                 Robert Lock | Michiel van Zomeren

TUDelft