Please read the following text carefully.

Afterward we ask you to draw a *Mind Map* around the predefined knotpoint:

"Which risks and benefits come to your mind when considering the use of socially assistive robots for therapy, care for older adults, education or as social companions?"

Socially assistive robots are increasingly used in social assistive tasks such as therapy, care for older adults, education, or as social companions. They are designed to support human users through social interaction. The goal of socially assistive robots is to create close connections and effective interactions with human users in order to support rehabilitation, enhance learning, or offer companionship to those who are isolated.

Since socially assistive robots are still in the development phase, it is important to consider the ethical aspects (= risks and benefits) of socially assistive robots.

Socially Assistive Robots

Possible benefits of socially assistive robots could include:

- Interaction with socially isolated or less socially connected individuals, such as older adults
- Promotion of social interaction in therapeutic settings, for example, as companions for people with autism to improve emotion recognition and interpersonal communication skills
- Support in educational activities and learning, especially for children with special needs or learning difficulties

Possible risks of socially assistive robots could include:

- Users might develop a dependency on socially assistive robots, especially if they provide significant support or help with daily activities
- The use of social assistive robots could lead to unemployment, as robots might replace people in the workplace (e.g., as therapists)
- Human-robot interactions could influence human interactions, as dealing with robots might shape our expectations, behaviors, and perceptions in social environments

The development of socially assistive robots is still in its early stages. You can contribute to the development of ethically safe socially assistive robots. For this purpose, we would like to find out your attitudes and feelings towards socially assistive robots. To this end, we have predefined the central concepts "socially assistive robot," "risks," and "benefits" at the center of your Mind-Map.

From these given concepts, only the emotional evaluation and not the text can be changed. We ask you to draw your thoughts and feelings regarding the question ***"Which risks and benefits come to your mind when considering the use of socially assistive robots for therapy, care for older adults, education or as social companions?"*** in your mind map. For this, you should draw all the advantages and disadvantages that come to mind regarding socially assistive robots around the given concepts "socially assistive robot," "benefits," and "risks."

Please read the following information on soft robots carefully.

Afterwards we will ask you to adjust your *Mind-Map*.

Currently, there is a trend towards using so-called <u>soft robots</u> for socially assistive tasks. Soft robots are a novel class of robots often inspired by the characteristics of living organisms, such as animals. Unlike other robots typically made from hard materials like metal or hard plastic, soft robots usually contain no electronic parts and are made from flexible, soft materials such as silicone. They often take natural forms and can bend, twist, and stretch, similar to living organisms, like snakes or octopuses.

An example of a soft social assistive robot is Paro. This robot is used in both nursing homes and therapeutic contexts. Paro looks like a small seal with soft, white artificial fur and has the ability to perceive, respond to, and express human emotions. For instance, it reacts to petting by moving its tail and opening or closing its eyes.

Socially Assistive Soft Robots

Possible benefits of socially assistive soft robots could include:

- Lower risk of injury during physical interactions due to their softness
- Promotion of social interaction in therapeutic settings, for example, as companions for people with autism to improve emotion recognition and interpersonal communication skills
- Natural and intuitive interaction with humans, as the soft structure and flexibility of soft social assistive robots can enable human-like movements and reactions

Possible risks of soft social assistive robots could include:

- Emotional dependency due to the lifelike characteristics of soft robots, which could potentially limit engagement in human interactions
- Human-robot interactions could influence human interactions, as dealing with robots might shape our expectations, behaviors, and perceptions in social environments
- The ability of soft social assistive robots to evoke emotional responses could be problematic if it aims to influence the behavior or decisions of users

After reading the information about socially assistive soft robots, we would now like to ask you to adjust your Mind-Map. You can add new benefits and risks or delete already drawn concepts.