



# InClass: Telepresence Robots in Schools

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InClass 

# Our Team

1. Syddansk Universitet - Sonderborg, Denmark
2. Blue Ocean Robotics Aps - Odense, Denmark
3. Leuphana Universitat Luneburg - Luneburg, Germany
4. Universita Degli Studi Di Napoli Federico II - Napoli, Italy
5. Fundatia EOS - Educating for an Open Society - Timisoara, Romania
6. Cyprus Computer Society - Lefkosia, Cyprus
7. Valsts Izglitiba Satura Centrs - Riga, Latvia



# Why telepresence robots?

Telepresence robots provide numerous benefits to children who cannot participate in the classroom

- they allow them to move around freely, talk to whom they want, look at what they want, participate in group work, join in social activities, etc.
- they thus reduce the negative effects of social isolation



# Project aims

In this project, our main aim is to help children with health issues attend and integrate into their classrooms by means of telepresence robots. Specifically, we intend to study:

- What kinds of resistances and obstacles there may be by teachers, principals, parents, children at **school** level;
- How the robot is perceived by kids in the **classroom**, what problems may arise, what benefits there may be, what practices and workarounds emerge and turn out useful, as well as how the **kids** (in quarantine, in hospital etc.) perceive the situation;
- How **telepresence robots** can be developed to support their use in schools; and
- How telepresence robots can be used to support **intercultural exchange**.



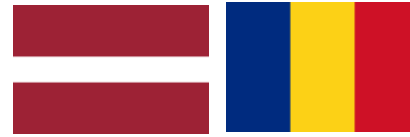




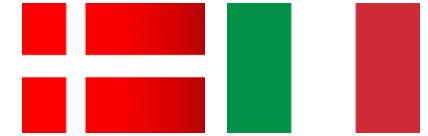
# Telepresence Robots Tested



GoBe Robot



Ubbo Robots



Double 3 Robot

# What have we done?

- We have taken telepresence robots into schools in all of our partner countries
- We identified potential barriers: What are the problems arising?
- We identified best practice: What works best?
- We have carried out some experiments to understand both the problems and the solutions better

# Case studies of children using telepresence robots in the classroom



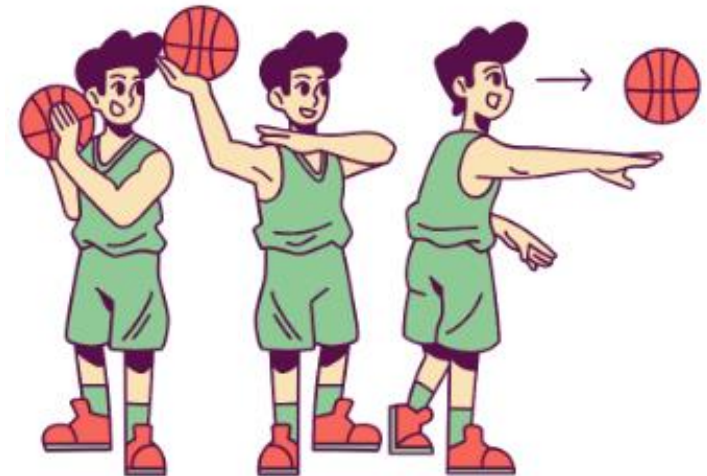
# Elizabeth attends chemotherapy

- Elizabeth is 11 years old. She lives in a small town. At the moment, Elisabeth cannot attend school for health reasons, but she works hard on her homework and school assignments. She is currently undergoing chemotherapy. She frequently has to travel to the capital for hospital manipulation before returning home. To ensure her successful studies, they decide to use a telepresence robot for teaching. The classroom is really small but very cosy, and all classmates are welcoming and understanding. Elizabeth participates diligently in all her lessons. She actively studies and converses with her classmates.



# Peter in basketball training camp

- Peter is a student in 11th grade. He is an active sportsman. Outside of school, he plays basketball in a junior league. He often participates in training camps and competitions at home and abroad. Because he is one of the best players on the team, he gets to compete quite frequently. So he often misses school. Peter is hard-working; he tries to do all his homework between practice and games, but he doesn't always succeed. When he hasn't learned the material, it is harder to do the assignments; it takes more time because he has to search for tutorials or videos on the internet. When Peter is not training or playing games, he connects to the lessons with the help of a telepresence robot.



# Andrew after a car accident

- Andrew is a 10th grade student. A road accident injured him, necessitating several operations to restore his ability to walk. As a result, he was unable to attend school for several months. While Andrew was still in the hospital, his teacher suggested using a telepresence robot for studying, which would allow him not only to study but also to socialise, as being in the hospital alone was boring and sad at the same time. The robot allowed Andrew to study and chat with classmates during breaks. Although he was only able to participate for 20–30 minutes at first, after a while, he was able to participate for the whole day. Following his hospital discharge, Andrew maintained his connection to the robot and continued to learn at home.



# John takes part in the student parliament elections

- John is an active 10th grade student who is participating in the Student Parliament elections this school year. He wants to become president of the Student Parliament. He has a networking event with international students in another city on election day, unfortunately. Since he cannot be at school at the time, he joins the elections and takes part in debates and election campaigning, travelling around the school and talking to the students.





# John takes part in the student parliament elections

- He managed to win the elections and become President of the Student Parliament. As there is a photo shoot and he is not at school, he still gets in the picture because he logs on and follows the events at school with the help of a telepresence robot.







# Feedback



- Children and Teachers ❤️ it!
- Teachers need to be trained
- Interaction and caring
- Our buddy



*The Italian partners noted “We raised empathy to help students perceive the robot user better”.*

# Summary

- Our results show that
  - There are many easy solutions to address potential barriers
  - The telepresence robot can be perceived as an asset if the school experiences a need
    - We have identified 5 scenarios of use:
      - children with longterm illnesses
      - children with anxiety
      - children traveling, in sports camps or competitions etc.
      - language classes, bringing in native speakers or kids from other countries
      - museum/site visits
    - We believe that the 5 scenarios help address the current hesitations

<https://www.sdu.dk/en/inclass>



Search

InClass 



Introducing telepresence robots into schools across Europe to support the inclusion of children with health issues in the classroom



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