



Virtual Biomedical and STEM/STEAM Education

2021-1-HU01-KA220-HED-000032251

Laboratory hands on skill course Laparoscopy Surgery Simulator Course



Co-funded by
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.



PÉCSI TUDOMÁNYEGYETEM
UNIVERSITY OF PÉCS

U.PORTO



Laparoscopy Surgery Simulator Course

All manipulation skills are practiced via the peg transfer simulation environment in VR.

I. Introduction to Laparoscopic Surgery

- Brief overview of laparoscopic surgery
- Advantages of laparoscopic techniques over traditional surgical procedures
- Benefits of using VR goggles in surgical simulation

II. Structure and Hardware of the Laparoscopic Simulator

- Use of VR goggles and controllers
- Characteristics of the simulation software
- Simulation of laparoscopic instrument handling

III. Basic Movements and Positions in Laparoscopic Surgery

- Proper positioning of tools and anatomy
- Practice of appropriate hand movements in the simulator

IV. Tissue Manipulation on the Simulator

- Simulation of tissue manipulation, shifting, and rotation
- Timed exercises and tasks for performance improvement

V. Feedback and Development

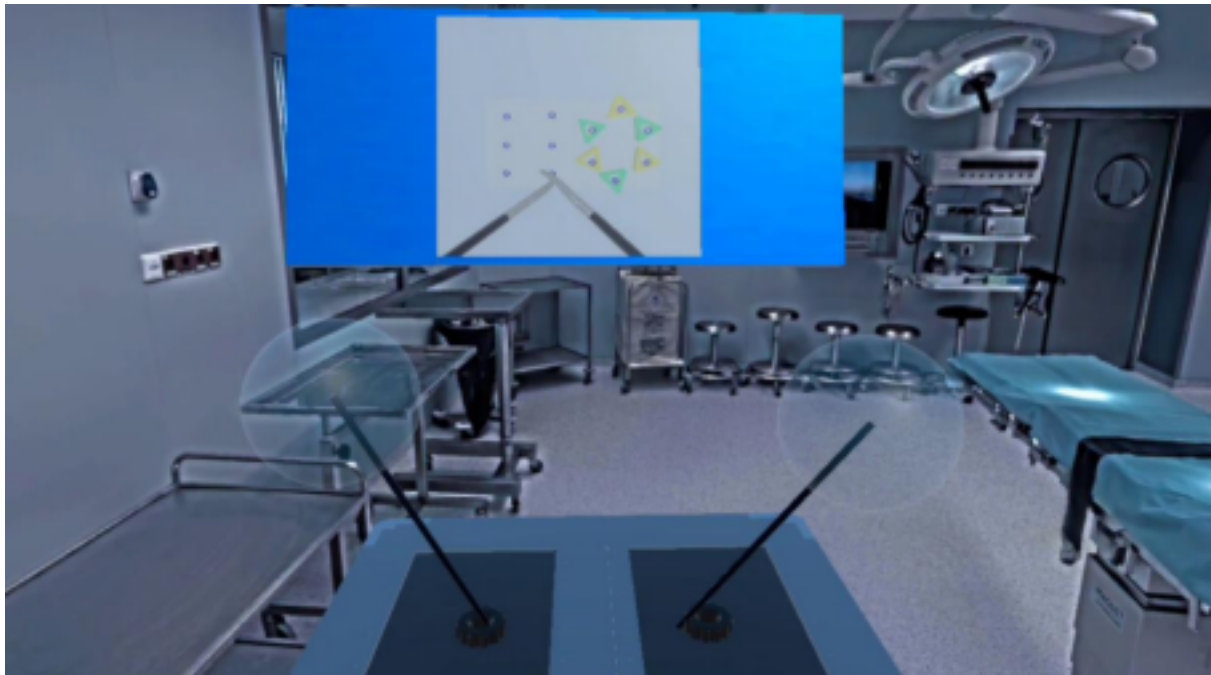
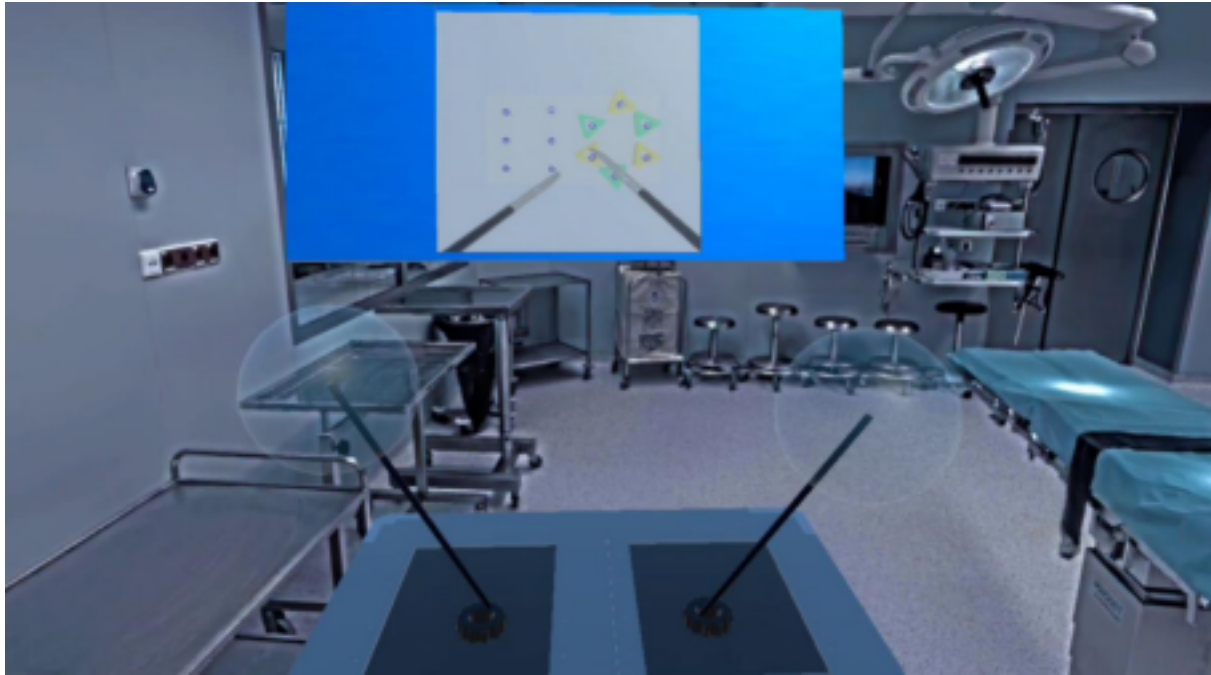
- Evaluation of performance on the simulator
- Use of feedback for performance enhancement
- Gradual increase in difficulty of exercises and scenarios for progress



VI. Examination and Assessment

- Evaluation of skills and knowledge achieved by students
- Assessment and documentation of learning outcomes from this instructional material

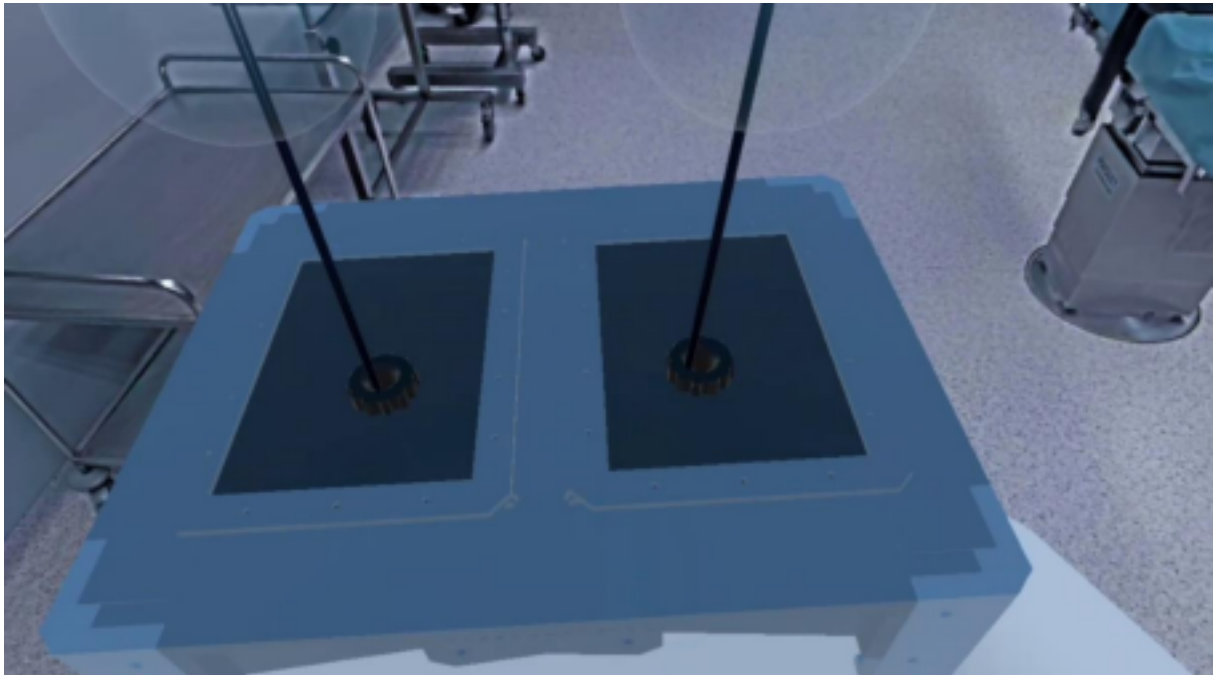
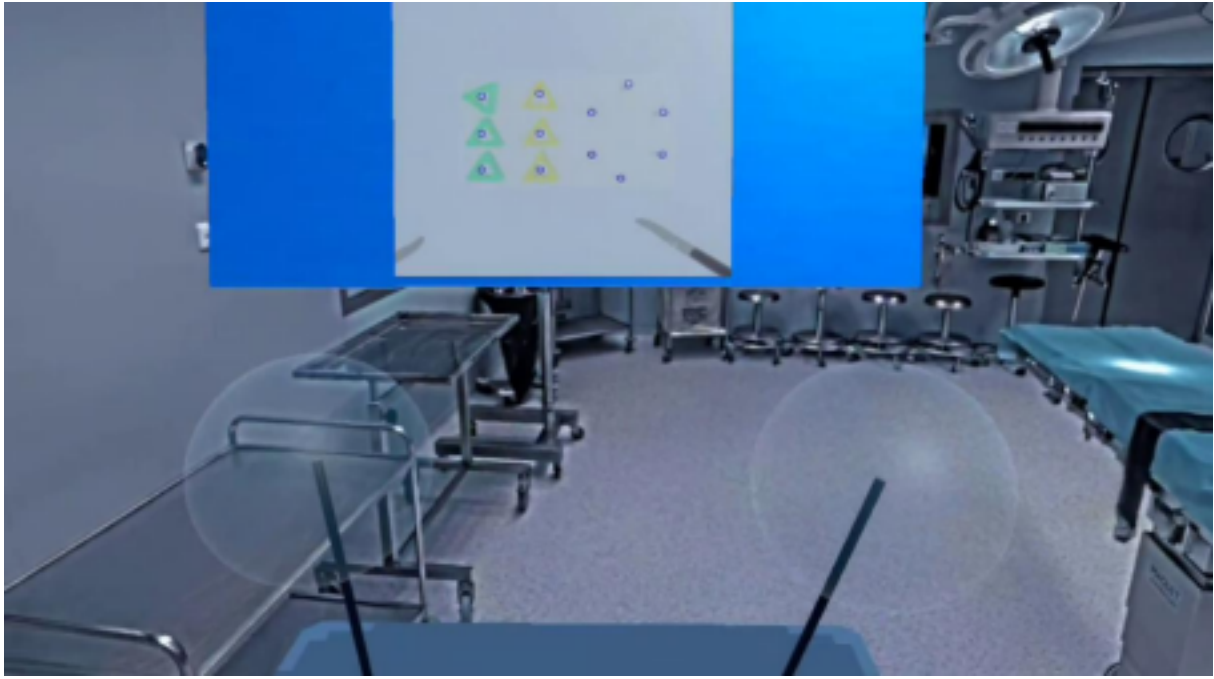
Screenshots from the VR simulator:



PÉCSI TUDOMÁNYEGYETEM
UNIVERSITY OF PÉCS

U.PORTO

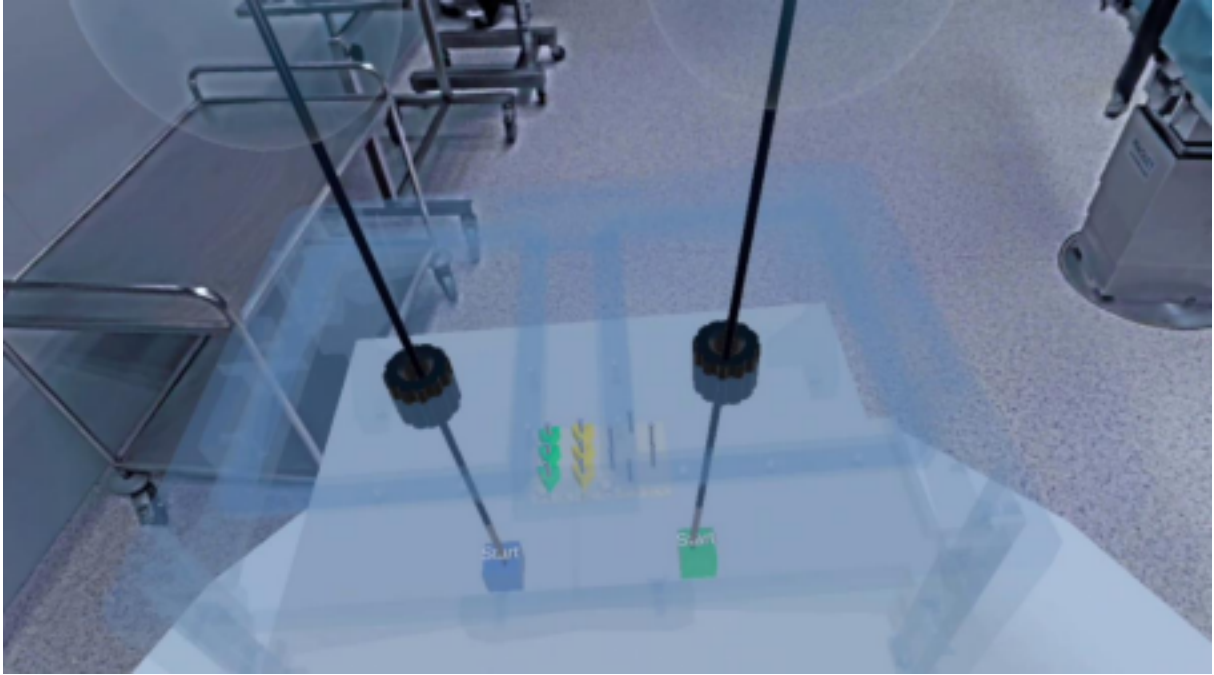




PÉCSI TUDOMÁNYEGYETEM
UNIVERSITY OF PÉCS

U.PORTO





PÉCSI TUDOMÁNYEGYETEM
UNIVERSITY OF PÉCS

U.PORTO



Politechnika
Śląska

