UpSkill Services

VR-enabled X-ray training

Practical X-ray education and assessment on demand

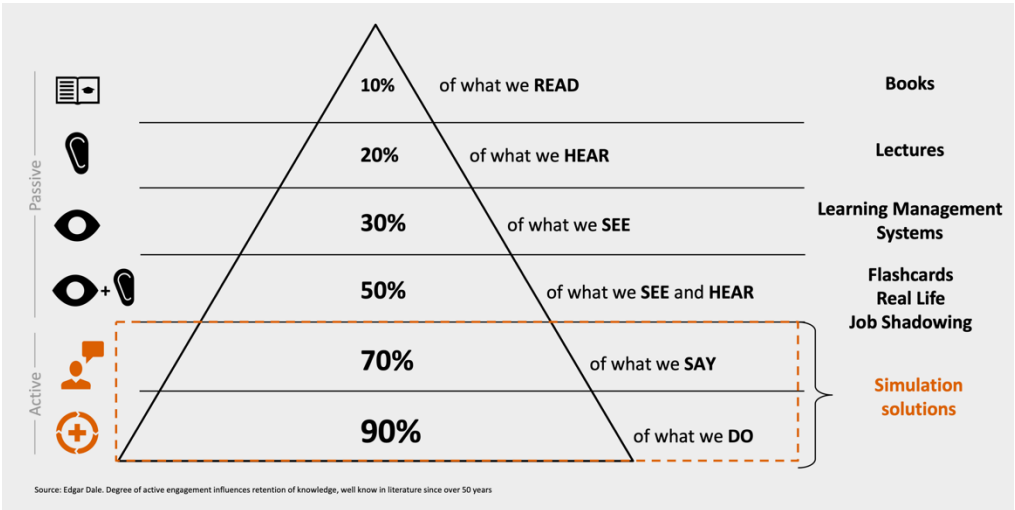
The clinical X-ray market is growing. One reason is the demographic change: One third of the population will be 65 years old by 2025[1] – and being more susceptible to chronic diseases, the elderly tend to have a greater number of imaging procedures. There's also a rising prevalence of cancer and cardiovascular diseases.

For healthcare providers, this means they need to cut patient dose – for example, by reducing repetition rates due to improper exposure or positioning. Continuous training can help improve staff competency. Virtual Reality allows for higher training efficiency.

siemens-healthineers.com/services/customer-services/partner-up-for-workforce-education-and-efficiency

VR-enabled X-ray training is a mobile training application that helps to practice and assess X-ray training in a virtual environment.

- **Increase efficiency in education** with a virtual and interactive X-ray simulation that allows replacement up to 50%[2] of practical training on a physical device
- **Let staff learn at their own pace** with Virtual Reality Practice in an immersive VR exam room that features an anatomically accurate patient with full skeleton (including adesktop version)
- **Improve staff competency** with a wide range of practice modules, including more than 84 million different scenarios based 20 body segments and covering all 206 human bones



New technologies like Virtual Reality have a major impact on the changing education market. Simulation solutions can provide direct and purposeful learning experiences, as people remember better the things they say and do.

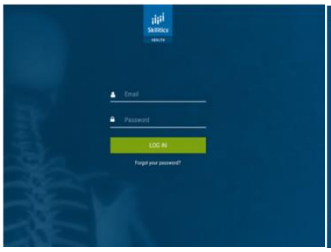
1) https://www.globaldata.com/elderly-population-to-outpace-overall-population-growth-rate-between-2018-and-2025-in-americas-says-globaldata/ - US
2) The NCSBN National Simulation Study: A Longitudinal, Randomized, Controlled Study Replacing Clinical Hours with Simulation in Prelicensure Nursing Education

SIEMENS Healthineers

Practical X-ray education and assessment on demand with VR-enabled X-ray training

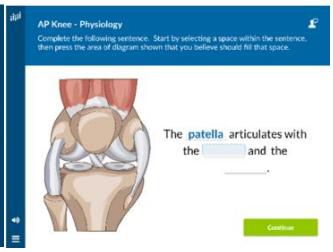
The mobile training application features an immersive VR exam room, including an anatomically accurate patient with full skeleton. The virtual X-ray system reflects real-world operation in a vendor-agnostic environment. Users and educators can track progress with both learning and X-ray image data. Let's deep dive into some functionalities:

Adaptive assessment modules



Individual user login

to have an individual learning experience



Assessing knowledge

by answering > 800 questions

Practice modules

58 VR body components

for individual practice scenarios

Self-testing knowledge

in a virtual simulation environment

Comprehensive training modules

Head and Neck

C-Spine - AP, AP Odontoid Peg, Lateral
Facial Bones - OM, OM30, Lateral

Upper Limb

Hand - Lateral, Ball Catchers (Nørgaard Projection), Finger PA/DP, Lateral, Oblique, Thumb AP, Lateral & Oblique
Wrist - PA, Lateral, Oblique, Scaphoid
Forearm - AP, Lateral, Oblique
Elbow - AP, Lateral, Oblique
Humerus - AP, Lateral
Shoulder - AP, Lateral Scapula, Axial

Trunk

Abdomen - AP
Chest - PA, Lateral
L-Spine - AP, Lateral
T-Spine - AP, Lateral
Pelvis - AP, AP Hip, Lateral Hip

Lower Limb

Toes - Dorsi Plantar, Oblique, Lateral
Foot - Dorsi Plantar, Oblique, Lateral
Ankle - AP, Lateral, Mortise, Oblique
Calcaneum - Axial
Tibia / Fibula - AP, Lateral
Knee - AP, Intercondylar - Prone, Lateral, Skyline, Rosenberg
Femur - AP, Lateral

Siemens Healthineers Headquarters
Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen,
Germany
Phone: +49 9131 84-0
siemens-healthineers.com