



MANAGING PANDEMIC CHALLENGES AND
OPPORTUNITIES OF TVET IN THE ERA OF DIGITALISATION



VIRTUALITY – TOMORROW'S REALITY

Pasi Porramo



ADE OY

ADE Oy is Finland based high-tech software company that specializes in developing educational virtual reality environments, interactive web content, animations and customized CPQ solutions.



- Leading provider of virtual reality since 2004
- Expertise of thousands projects
- The world's first simulator-based competence assessment system
- Reliable partner with wide partner network (TUAS, OEP, Kiwa, Lingsoft)
- Sister company providing virtual surgery planning solutions (www.surgeryvision.com)



Producing skilled workforce (TVET) in Metaverse



Combining in Virtual training e-learning for theory and simulators for hands on trainings in certifications.

AR/VR/XR blending in same environment with authentic devices and very real virtual characters for improved effectiveness.

More effective Ai based training.



Is Virtual Education effective?

In use today widely in modern training :

Driving simulators - Flight simulators - Surgery planning - Healthcare training - forestry simulators, certificate training.

Training results same as classroom training.

- **4 x times faster** way to learn than classroom training.
- **Engagement.** Students' emotional connection to virtual education content is 3.75 times better than the connection to classroom teaching content and 2.3 times better than the connection to the content of online teaching.
- **Trust.** After virtual training, students feel 275% more confident when working with a learned topic. The trust gained through virtual education is 39% better than that gained through classroom teaching and 35% better than the trust achieved through online teaching.

(PwC VR Soft Skills Training Efficacy Study, 2020)



Benefits of Virtual Education

Virtual trainings brings benefits to all parties from students to teachers and institutions.


- Interesting way to learn
- Faster way to learn than on site practice.
- Repairs done rarely can be easily trained also by senior staff
- More efficient training sessions
- More practical training hours
- Safe environment for trainings
- Training session possible which are difficult to organize in real life
- Easiness of grading and learning recognition
- Competence identification
- Ready training episodes, less preparing for lessons, frees resources from routine work
- Cost savings
- Standardized grading and reporting
- Risk to damage equipment is reduced
- Green and sustainable way to learn and educate





Isoveli - platform

Identity providers (SSO)




- O365
- Azure ID
- ...



Isoveli cloud Service


- User and organizations
- Applications and content
- Results and reporting

Learning / competence management systems




- Moodle
- Kiwa competence admin
- ...


End users



- Launcher
- Browser



- Browser



- Browser



Video conferencing service:

- Realtime monitoring
- Voice communication

Admins / supervisors



- Isoveli admin management
- Monitoring end users
- Help for end users

Local applications are used on PC's.
Online applications are used via browser with any devices.



Intelligent *ISOVELI* - platform

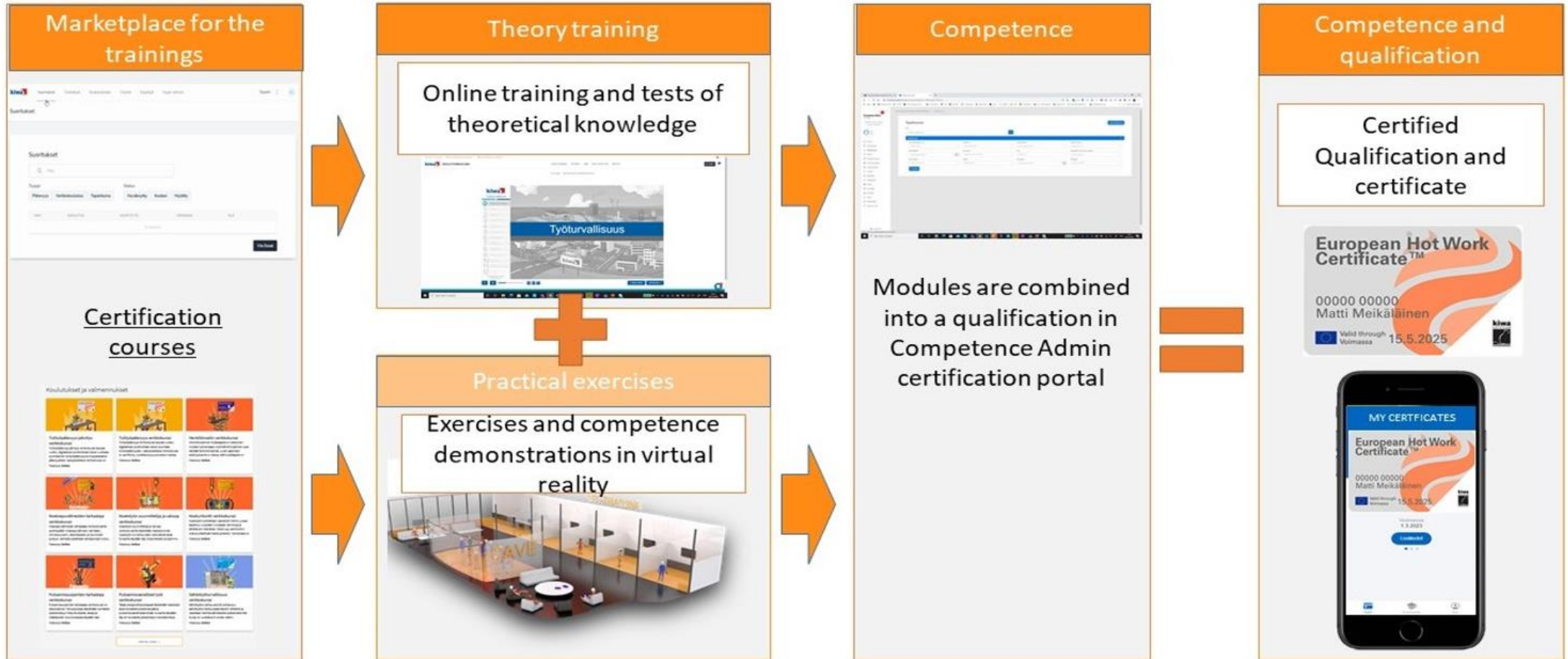


ADE *Isoveli* – platform is cloud-based SaaS service that is easily scalable.

- Education material library (VR trainings, videos, animations, interactive 360 web contents etc.)
- Performance monitoring
- Multiplayer functionality
- Remote monitoring
- Competency pre-evaluation
- Hands-on skills training
- Grading based on AI assessment
- Integrations into LMS and other systems



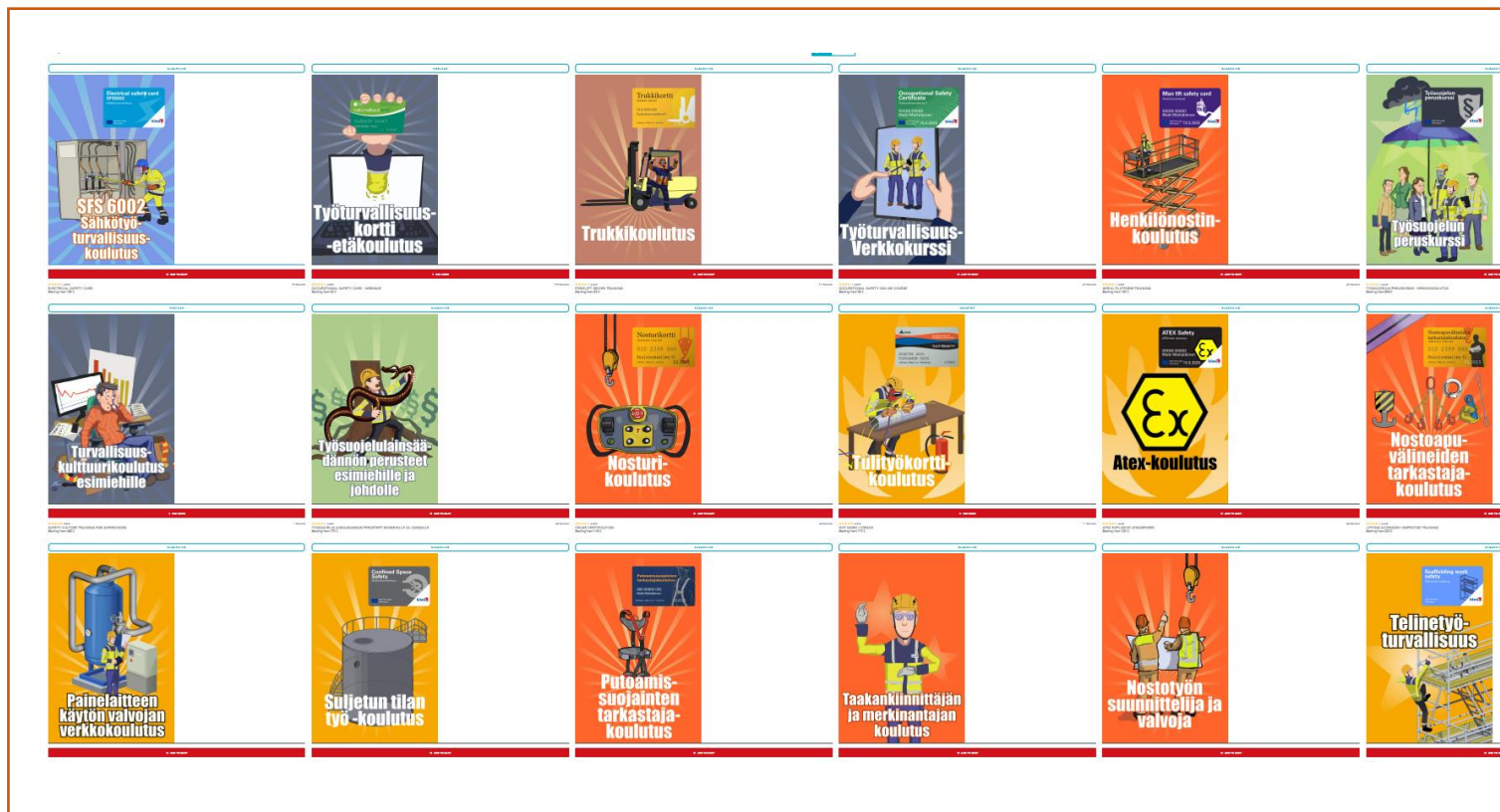
Access to training





Certifications from e-learning and simulators

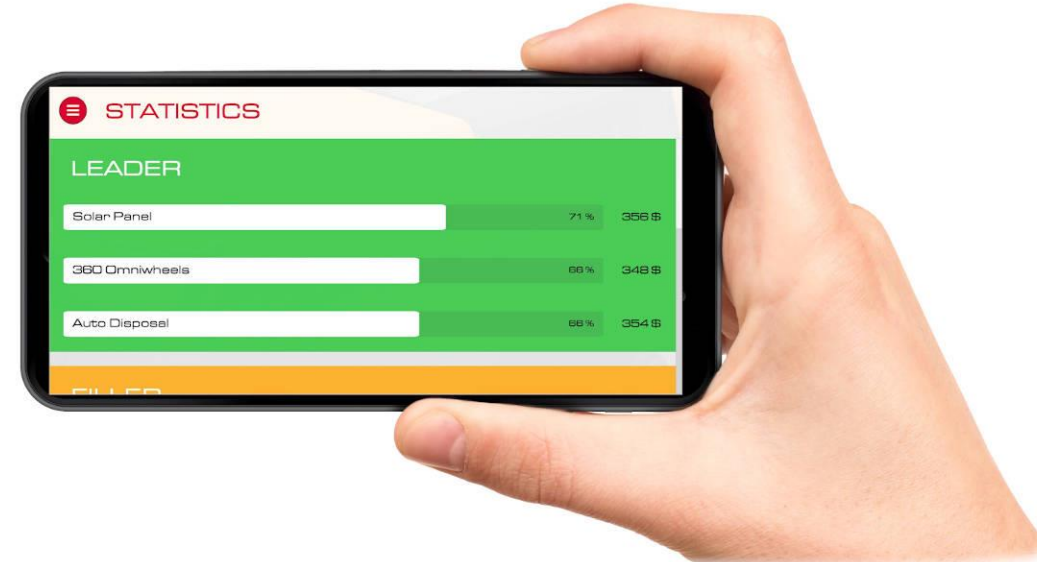
Wide library of vocational and qualification e-learnings and simulators ready for order directly or from web shops.





More accessible training simulations through AR

Implementing any 3D models and publishing in AR. Creation of new training around the models with Discovery platform for example in first aid trianings





ADE's authentic controller provides true user experience

Unique authentic hands-on controls developed by ADE.

The trainings are carried out with authentic controls, such as foam extinguisher or bridge crane control equipment's.

Controls are equipped with sensors to provide feedback how trainee is performing on training sessions.



Virtual reality simulators

Already **40 virtual simulators ready to use**. Extensive, constantly growing library of virtual trainings created together with Kiwa and Finnish vocational institutes.

Trainings presented: <https://virtualtrainings.ade.fi/>

Certified

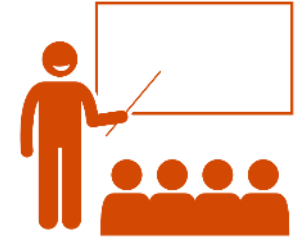
<https://koulutusmaailma.fi/fi/courses>

training:



Producing virtual trainings together

- 1) Analyzing certification, law, pedagogy, technical requirements and co-operation in legislation and common guidelines.
- 2) Data creation in large quantities from training large bodies of industry workers in virtual reality to automatically create impact studies.
- 3) Scalable trainings with very low per student unit costs
- 4) Metaverse for students and teachers to interact and create more effective trainings.





Digital trends

Metaverse for seamless interactions between teacher student and Ai students to multiply amount of certifications and diplomas given.

AI-based learning to improve training, monitor of development, screening tests and grading. Monitoring behavior using different automatic tracking modes (eye tracking) and sensing mods

Linguistic training and social skills based on AI environments.





Lingsoft®
LANGUAGE
SOLUTIONS

TURKU AMK
TURKU UNIVERSITY OF
APPLIED SCIENCES



Digital divide

Certification + focuses on effectively teaching the teachers. Certification training for teachers digitally by combination of e-learning, simulators and Ai based screening test. In addition to the certification teachers receive a training package based on regulations and standards to use.

Continuous development of more effective virtual training and making effective simulator training available through research and technology development.

Ai based linguistic training for social and language skills. Competence pre evaluation with simulators and Ai based grading.

Digital certification trainings based on global standard's with low unit prices.



THANK YOU

ADE Oy

Hämeen valtatie 144

20540 Turku, Finland

virtualtrainings.ade.fi

www.ade.fi