



MINISTRY OF LABOUR, INVALIDS AND SOCIAL AFFAIRS
College of Technology II

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**APPLICATION OF VIRTUAL REALITY
IN VOCATIONAL TRAINING AT HVCT-II**



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Ho Chi Minh City, 11.2024



Ho Chi Minh City College of Technology II - HVCT

- Belonging to MoLISA with 46 years of development
- Total enrolment: 4,000 to 5,000 students and trainees
- Many trainers and students won high prizes and certificates of high skills at national and international competitions
- Many reputable enterprises partner with us in the training, upskilling of their workers...
- HVCT strive to be a leading and model TVET institution in the country, proving high quality training, approaching international levels

Faculty of Labour Protection and Environment

Occupation: Sewage Technics and Wastewater Treatment

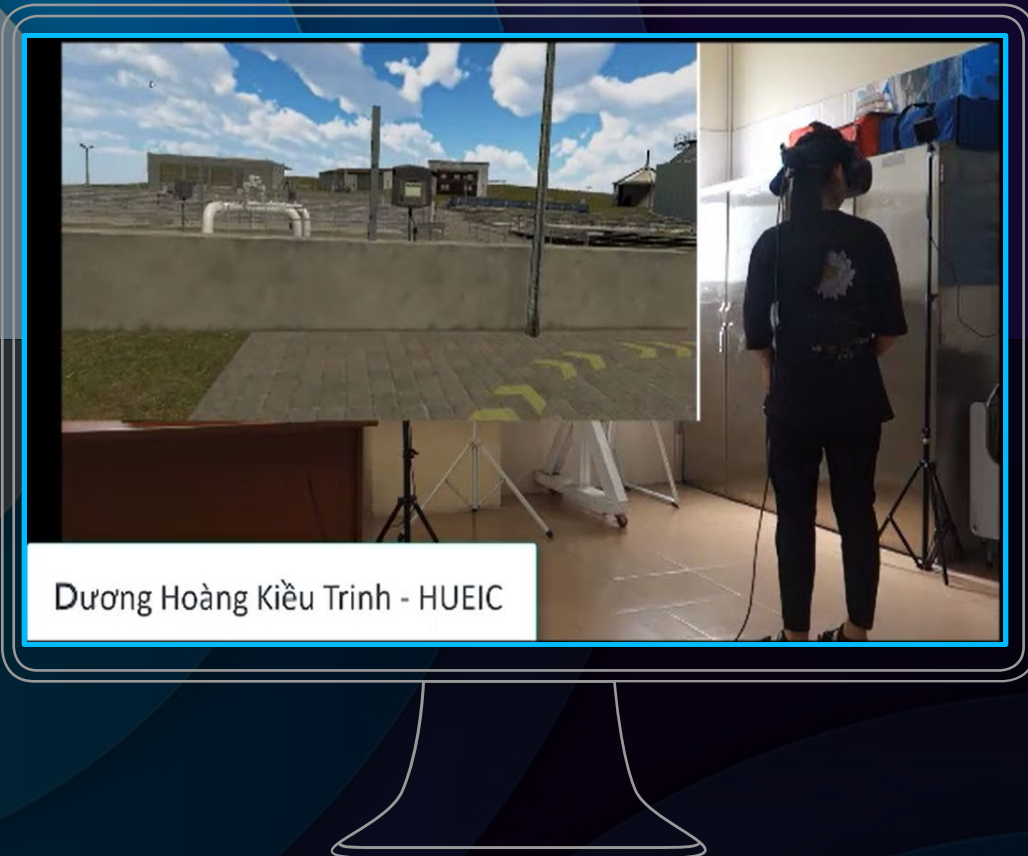
Sewage Technics and Wastewater Treatment is supported for training of high quality by the Vietnamese-German Programme on Reform of TVET sponsored by BMZ (Germany) in cooperation with MoLISA (Viet Nam).

Sewage Technics and Wastewater Treatment is about: :
Operation of drainage network; Maintenance of drainage network; Operation and maintenance of pumping station of wastewater; Operation of wastewater treatment plant; Maintenance of wastewater treatment plant; Monitor quality of treated wastewater.



Application of Virtual Glasses in Sewage Technics and Wastewater Treatment

Application of technology in TVET, a reform milestone toward the future



For the first time in Viet Nam, 2019

Application in the WorldSkills 2019 in Kazan in the Federal Republic of Russia, the occupation “Water Technology”

Benefits

Not just as Virtual Glasses, VR is an evidence of high and priority attention on TVET of the government and support organisations



Training on Sewage Technics and Wastewater Treatment

Early exposer by students to the model of wastewater treatment plant

Early exposer and understanding on the operational processes of plant components

Familiarity with the overall operation of wastewater treatment plant



Training of WorldSkills competitor

A competition exam at the WorldSkills – on Water Technology

Including the following tasks:

- Realise current status and important data/indicators
- Find out errors in the plant and give solutions
- Analyse/Evaluate the data/indicators and the current status of the system



Exhibition and advocacy in promotion of the occupation

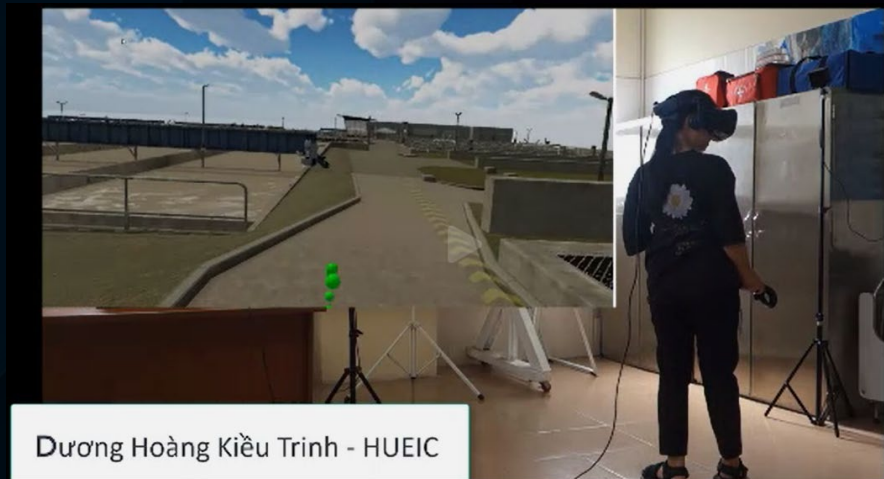
Exhibit at:

- Enrolment day and Skills Competition
- Water and Environment Festival
- GEFE 2022 and 2024 (Green Economy Forum and Exhibition)

Some pictures about the application of Virtual Glasses at HVCT



Some pictures about the application of Virtual Glasses at HVCT



Dương Hoàng Kiều Trinh - HUEIC



Some pictures about the application of Virtual Glasses at HVCT



- <https://youtu.be/QiismRfz0gY>

Difficulties/Challenges with VR

Use guidance

- Require technical guide with sufficient experiences to directly install, operate, and regularly monitor the use at Skills competitions and events
- Too little materials about/for the software. Current materials used for the software in Viet Nam are searched and developed by Vietnamese specialists on Water Technology

Oversight Programme Errors

- The software is run on Window 11, Intel core i7, Ram 16G and graphic design RTX 3060ti but this is not sufficient
- Frequent errors due to insufficient RAM for boosting/start-up
- There has been identified instability due to high processing and long time of use

Flexibility or Multiplication?

- Copyright is for one equipment only – what if this collapses/is out of order
- Adjustment of components/details is not allowed in the wastewater treatment plant model
- What about development of content?
- What if and how about multiplication of this model to other plants/organisations

Our recommendations on VR

VR Glasses is highly potential in promoting occupations on Environment – Wastewater Treatment and attracting more young people interested in pursuing this field

Equipment

- The equipment needs upgrade; one more equipment is necessary in case of error or more than 1 is needed for training in parallel
- Connection with virtual glasses should be wireless

More flexibility

- Higher flexibility of the software is necessary to be more relevant with diverse needs/uses
- If possible, it should allow us to decide on error locations and to change indicators/data to allow assessment on different levels of understanding of students / competitors.

Better multiplication

- Why only one plant in the software?
- How can we apply this to other plants in Viet Nam
- There are many big plants on wastewater treatment that can apply. Why not?
- What if HVCT guests and visitors are allowed to visit and experiment the campus, workshops via the Virtual Glasses?

Sewage Technics and Wastewater Treatment

Water Technology



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I very much look forward to the advancement of
this occupation

Dissemination helps us expand

Changes are key for success

Companionship of everyone is indispensable in
our efforts

**THANK YOU VERY MUCH
FOR YOUR ATTENTION**