Receipt and Commissioning of Virtual Reality (VR) Equipment

The University of Oum El Bouaghi (UOEB) has its origins in the Ecole Normale Supérieure, erected by decree 97-158 of May 10, 1997, as a university center and then as a university in 2009. Currently the university has 7 faculties, 2 institutes among these two institutes we have one which is specialized in vocational training (Institute of Applied Science and Technique of Technology of Ain M'Lila which will be the core of this project according to its specification, see below) and 24 research laboratories, spread over 5 campuses.

https://www.univ-oeb.dz/en/

The desire to open up the University of Oum El Bouaghi internationally has resulted in the signing of more than 42 framework cooperation agreements with universities in several countries. This rich and diversified cooperation network was designed to facilitate scientific exchanges and the mobility of teacher-researchers, students and technical and administrative staff.

Although attacking a practically untouched problem, VET as such does not exist in the field of higher education in Algeria, the VRinVET project nevertheless relies on a certain number of previous initiatives that can serve as its base. Indeed, as already mentioned, the implementation of the VET implies the availability of a description of the training courses concerned in terms of skills. A priori, training of a professional nature lends itself much more easily to such a description than traditional training, which emphasizes knowledge above all. From a perspective of experimentation, as envisaged by VRinVET, it is therefore normal to bet on such training.

It has already been more than six years since our Ministry of Higher Education and Scientific Research had launched the opening of a new type of institute called: Institutes of Applied Sciences and Technique ISTA in partnership with the ADIUT "Association des IUT of France". First at the universities of Ouargla, Bouira and Oum El Bouaghi followed from the 2016/2017 academic year by four institutes in Constantine, Blida, Oran and Tlemcen and recently three other institutes at USTO, Boumerdes and Skikda. That is 10 ISTA across the national territory. These institutes specializing in professional training aim to encourage and support students wishing to invest in this type of course for a bachelor's degree in order to meet the needs of companies in terms of middle managers. Currently the ISTA of the University of Oum El Bouaghi and the national coordinator of the ISTAs and with the local collaboration with the Ministry of Training and Professional Education, so it is a platform to boost the VRinVET project. Our staff has extensive experience in developing the capacity of young people in different fields through trainings, workshops and awareness campaigns to address their concerns. The main priorities of the University of Oum El Bouaghi through ISTA are to improve the training and management of all components of professionalization: Fundamental, technical, methodological and cross-cutting components.

As part of the Erasmus+ project entitled “ENHANCING THE QUALITY OF VOCATIONAL EDUCATION AND TRAINING THROUGH INNOVATION WITH VIRTUAL REALITY (VRinVET),” the University of Oum El Bouaghi – Institute of Technology in Ain M’lila has received and commissioned a batch of cutting-edge technological equipment dedicated to enhancing both educational and research capabilities, particularly in the field of vocational training supported by virtual reality.

This delivery, completed in April 2025, marks a significant step forward in the integration of immersive technologies into vocational education in Algeria. The equipment is intended for use in practical and distance learning sessions, contributing to the creation of innovative and interactive training environments.

A general overview of the components received under the VRinVET project is presented in Figure 1, illustrating the key items delivered within the framework of this initiative.

Figure 1: Overview of the equipment received under the Erasmus+ VRinVET project

Equipment Description

1. 8K 360° cameras - Insta360 X4

Two Insta360 X4 cameras (Figure 2), offering high-definition 8K 360° video capture, enabling the creation of immersive learning content tailored to real-world vocational contexts.

Figure 2: 8K 360° Cameras – Insta360 X4

2. Meta Quest 3 Virtual Reality Headsets – 512 GB

Eight (8) Meta Quest 3 virtual reality headsets (Figure 3), each accompanied by high-speed 5-meter USB cables (Figure 4), designed for delivering interactive training modules in both individual and group settings.

Figure 3: Meta Quest 3 Virtual Reality Headset

Figure 4: USB accessories that come with Meta Quest 3 headsets

3. SimLab Composer Mechanical Software

SimLab Composer – Mechanical Edition (Figure 5), a professional-grade 3D modeling software with a two-year license, to support the design and simulation of technical training scenarios in virtual environments.

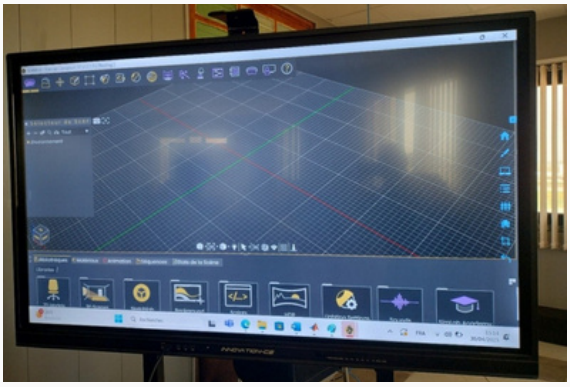

Figure 5: Screenshot of the modeling environment in SimLab Composer

4. Virtual Reality Glasses for Smartphones – Renkforce RF-VRG-200

Figure 6: Renkforce RF-VRG-200 VR Goggles – Received Model

Twenty Renkforce RF-VRG-200 VR goggles (Figure 6), compatible with smartphones, which will facilitate mobile VR experiences for awareness-raising and outreach activities.

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This equipment is intended to be used by trained staff and students in various programs to create, deploy, and experience vocational education content in a fully immersive, safe, and controlled digital environment. These tools will also serve in piloting educational content, developing new teaching methodologies, and enhancing access to digital innovation in the Algerian vocational education sector.

Objectives and Implementation:

The use of virtual reality aims to:

- Offer students an **immersive and engaging learning experience**
- Promote **simulation of real work situations**
- Strengthen technical and digital skills
- Develop 3D content tailored to the local context of vocational training

Expected Impact:

Integrating VR equipment helps modernize the pedagogical approach, enhance the quality of technical education, and better prepare students with the skills required in the workforce. These devices will be used starting in September 2025 as part of both in-person and online training sessions planned for students.

Conclusion:

This newsletter highlights the commitment of the VRinVET Algeria team in establishing an innovative technological infrastructure. The effective use of this equipment will transform vocational training and promote greater digital inclusion.

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