













## REPOSITORY OF GOOD DIGITAL LEARNING PRACTICES IN THE AUTOMOTIVE SECTOR

<b>Electude as a trainer for realistic practices in VET</b> Spain/ CIFP Ferrolterra/ Ramón Lucas López	
<b>Brief description</b> Use of the LMS Electude as a complement for the conventional classes in the automotive VET cycles through specifically designed tools and activities.	
 <b>What was the purpose of the practice?</b>	To provide an alternative way to learn and practice different automotive skills during the pandemic lockdown situation.
 <b>What was the initial situation / specific context when the practice was implemented (digital strategy, digital equipment...)?</b>	<p>When I decided to use this approach, learners were finishing the course at the VET centre and they were about to start practices at several automotive companies. Because of the pandemic lockdown, the beginning of these practices was delayed for an unknown period of time, so we had to seek alternatives to replace them in order to complete the training of our students. In addition, some of the learners had failed the subjects and we had to find new ways to help them to retake them.</p> <p>For some years now, the Regional Ministry of Culture, Education and University of Xunta de Galicia has implemented a digital policy aimed at improving the ICT skills of teachers and giving support to digital technologies at educational centres. It includes regular training courses for teachers and various digital equipment and software (PCs, laptops, digital boards, LMS Moodle, etc.). During the pandemic there were additional measures such as loans of laptops with free Internet connection for students with few economic resources, installation of HD webcams in the classrooms, etc. Recently it has been started the Galician Network of Digital Education in order to get the most out of the use of digital technologies applied to the teaching-learning process in the classroom, and to ensure that schools are digitally competent educational organizations.</p>
 <b>Could you describe the implementation process of the practice?</b>	I think that the implementation of this practice was pretty straightforward. It took me about 3 to 4 hours to learn the

	<p>proper operation of the platform, so I might say it has a fast learning curve.</p> <p>After this, unit preparation and assessment tasks were done simply by selecting different items from a list related to each topic. Actually, the longest part was to learn by myself the proper operation of Electude.</p>
 <p><b>What is the academic discipline concerned? (only if the practice is specific for this subject)</b></p>	<p>This practice was applied in the next 2 subjects:</p> <ul style="list-style-type: none"> <li>- Charging and starting systems, which focuses on understanding how electricity works, generation of electricity and starting systems, and how to repair them.</li> <li>- Engine auxiliary systems, which focuses on the understanding of the operation of motors and auxiliary systems and the way to repair them.</li> </ul>
 <p><b>Who are the targeted beneficiaries? (only if the practice is specific for these beneficiaries)</b></p>	<p>The practice was implemented with learners of 2 groups:</p> <ul style="list-style-type: none"> <li>- Technician in Motor Vehicles Electromechanics (Intermediate VET cycle, EQF ~4), 1<sup>st</sup> course, subject Charging and starting systems, average age 20 years, 10 students, Dual VET modality.</li> <li>- Automotive technician (Higher VET cycle, EQF 5), 2<sup>nd</sup> course, subject Engine auxiliary systems, average age 24 years, 12 students, Dual VET modality.</li> </ul>
 <p><b>Could you describe the pedagogical approach associated to this practice?</b></p>	<p>Making use of Electude, students can diagnose technical problems in cars and simulate repairs. For instance, an engine simulator allows students to monitor the normal functioning of the different components of a vehicle, identifying an engine mechanical breakdown or an electronic failure.</p> <p>The characteristics behind this approach may be summarized as follows:</p> <ul style="list-style-type: none"> <li>• Learners acquire theory concepts by their own guided by Electude and then practice skills are simulated. They can count on the teacher's advice at all times via e-mail or the virtual classroom forums.</li> <li>• Every lesson comprises of short paragraphs of well-presented content, designed to captivate students' attention.</li> <li>• The lessons were delivered online asynchronous, at their own convenience.</li> </ul>

	<p>At the end of each chapter, students are forced to provide answers to one or more questions in order to continue.</p> <p>The assessment of learners was carried out based on the proportion of positive results, collected automatically by Electude. This provides the instructor great feedback regarding the real progress of their student.</p>
 <p><b>What are the tangible results of this practice? (if relevant)</b></p>	<p>The use of this platform allows to get different kind of results related to the training activities. The interface shows a simulator where the learners can interact with different controls to get a result.</p>
 <p><b>What is the impact of this practice (on learners/ on trainers)?</b></p>	<p>In my opinion, it was very positive for learners because it allowed them to practice some skills which are, normally, impossible to learn out of the workshop.</p>
 <p><b>What are the benefits of this practice?</b></p>	<p>This practice has been proven useful as a reinforcement for theory and as a previous training step just before visiting the workshop, but in my opinion, it cannot be used as a replacement for any of them.</p>
 <p><b>What advice could you give for a successful implementation of this practice?</b></p>	<p>Some of the learners had problems to learn the operation of Electude. In these cases, a short training by videoconference was enough to solve the problems and misunderstandings.</p>
 <p><b>How could one replicate/adapt this practice to a different context/ different scale? (if you have information)</b></p>	<p>In order to replicate this practice, it is necessary to have access to the LMS Electude, which depends on the payment of a license. Therefore, its replicability will depend on the budget of the VET centre.</p>
 <p><b>Testimonial</b></p>	<p>In my opinion, this practice allows to learn systems and reparation processes that cannot be easily learnt without practising in the workshop. During the pandemic lockdown, it was a perfect solution to explain this kind of contents. Under normal circumstances it might help to improve the motivation and understanding of the theory lessons, and it might be useful as a previous step before visiting the workshop, but never replace it.</p>