DEMO or DIE

Develop Engaging Massive Open Online Resources for Designers Innovative Education

Here are the Reasons to enrol in the DEMO or DIE Course

The DEMO or DIE project aim is to promote the use of digital technologies among "non-manufacturing" professionals and other potential professionals. The project started on 1st of November 2020 and ended its two-year period on 31st of October 2022.

Especially during the Covid-19 period, which affected the whole world, skills gaps in 3D Printing have existed. To respond to these needs, the DEMO or DIE project has developed an Inclusive and Open Access to 3D Printing Online Training by implementing a useful online curriculum. DEMO or DIE project expectations were to help with the development of schools and domestic users' competences in terms of general knowledge of 3D Printing, Design and Operation of desktop 3D Printers.

To accomplish this, DEMO or DIE partners have successfully implemented and completed five main results, train the trainers during a capacity building activity, conducted events to raise awareness about the project activities and to engage with the larger amount of people interested in learning about 3D printing technology.

A "Glossary List" was created, that explains technical terms used in 3D printing. The glossary is an important tool for students to be introduced to the technology, thus finding all the relevant terminology that they may encounter during their online education and current practice.

A 3D Printing Design and Operation Learning Units guideline was also developed, which contains the curriculum to support learning and to provide the necessary information to participants, such as entry requirements, scope of learning outcomes in each competence unit, expected workload, and the necessary software resources for learners and other additional learning materials. A recommendation was also included for trainers who would like to deliver the program in a face-to-face or hybrid environment. Innovative and interactive materials (int slides, videos, games and short videos) were developed to support students and develop their skills in 3D printing Design and Operation applied to Polymers. These materials can be accessible either through the project website (www. demoordieproject.eu) or the learning platform. Students can also take quizzes and make a self-assessment by answering multiple-choice questions after completing each competence unit. The learning and assessment materials were uploaded to the learning platform (Moodle) where students can manage their learning journey. Thanks to the platform designed with following a game-based approach, students can be engaged and motivated to acquire new skills. The Moodle platform contains videos, presentations, quizzes and due to the game-based learning, each activities provide to earn a star or medal at the end. The platform is compatible with smart-phones, tablets and computers and students can pick up where they left off. Additionally, there is a "Space Game" on the platform, where students can have fun with the game.

DEMO or DIE project has several impacts on target groups, and project partners. During the project life cycle, DEMO or DIE got direct contact with approximately 250 people from different backgrounds. For example, more than 100 external participants participated in pilot courses (Figure 1). Most of them stated that DEMO or DIE project course helped them to increase their level of knowledge, skills and competencies towards the use 3D printing technologies and the participants from non-manufacturing background, found the training very interesting and inspiring.

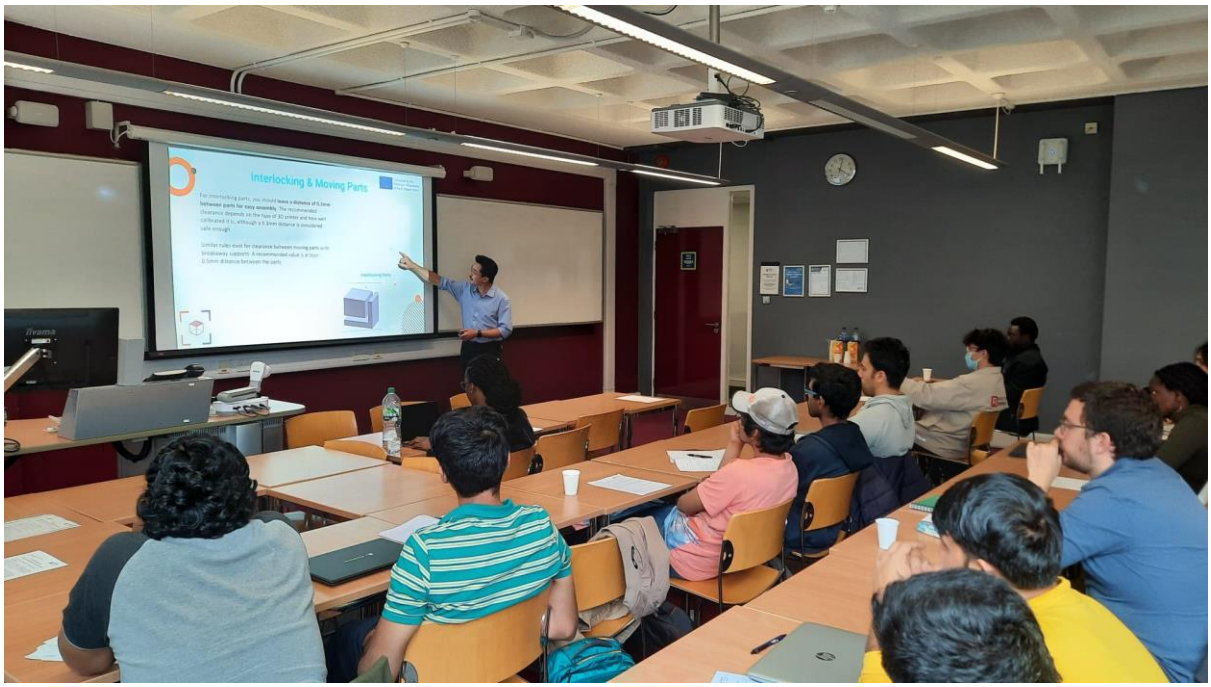

Figure 1 - Pilot course on 3D printing design for Material Extrusion Process delivered in the United Kingdom by the University of Brunel

Additionally, national conferences enabled to spread of the DEMO or DIE project towards more audiences amongst them students and teachers, as well as manufacturing professionals from Greece, Spain, and United Kingdom. The partners organized interesting activities to be able to address a wide range of audiences. For instance, DEMO or DIE Greek National Conference took place in Athens Science Fair. A booth was dedicated to DOD in the fair. For two days over 800 visitors including young students and people from different academic, research or educational institutions, showed interest in the DOD stand and 60 people closely examined the 3D Printing for MEX Moodle platform.

In Spain, the Additive Manufacturing Roadshow was organised in different cities such as Zaragoza, Barcelona, Madrid, and Valencia in cooperation with AITIIP and SICNOVA (Figure 2). DOD project results were presented to industry professionals in the event. Also, the national conference in the UK was combined with the STEM topic. To attract the attention of more people, STEM experts were invited as guest speakers. The conference reached out to people

Figure 2 - National Conference conducted in Spain by AITIIP

from academy, student, non-manufacturing sector, STEM Schools, STEM center and Start-up companies.

EWF also organized the project final conference in the context of 1st International-AM conference to present DEMO or DIE project to an international audience from AM academy, industry, and research areas. Besides these events, DEMO or DIE website and social media accounts have also ensured that the project is recognised by broader audiences. The website had over 3500 views since its start, while the LINKEDIN group has reached over 90 followers.

Figure 3 - Final Conference conducted in Lisbon by EWF and LMS

DEMO or DIE project has salient positive impact on partners, they acquired new knowledge and skills on pedagogical, technical and cooperative capacity. Thanks to the international partnership, they enriched their good practices portfolio and develop a network of AM industry, research and development organization and training providers. A Portuguese training centre, CENFIM, was enrolled in the project as an associated partner; through this collaboration specific contribution was provided to the consortium since they have more than 35 years old experience as professional training centre. Beside the partnership advantages, all partners empowered their educational staff on using innovative tools and teaching methodologies.

Overall, DEMO or DIE project has had a direct influence on target groups and project partners. Vocational Education and Training (VET) and Higher Education (HE) personnel, as well as stakeholders from VET Centres, National Qualification Authorities, Universities and the manufacturing industry can access the Inclusive and Open Access to 3D Online Training from the project website and deliver training to upskill and reskill of trainees or workforce corresponding to a basic level. Furthermore, the partners of the project had new experience in developing online materials on 3D Printing, Design and Operation of desktop 3D Printers and enlarged training portfolio in additive manufacturing field. DEMO or DIE project had finished with the mentioned and further added values on target groups and project partnership.

Although, the DEMO or DIE project is over but its impacts will live through the project's website, social media account, the integration of the DOD- Inclusive and Open Access to 3D Online Training into International AM Qualification System, a well through the delivery of 3D Printing Design for MEX courses within partners training offers using DOD materials in lectures and innovative activities.

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