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WP 4 – Establishment of CPD scheme and vocational training

D4.4 CPD scheme registration and accreditation

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About TeacHy

As the FCHT industry gradually emerges into the markets, the need for trained staff becomes more pressing. TeacHy2020, or short TeacHy, specifically addresses the supply of undergraduate and graduate education (BEng/BSc, MEng/MSc, PhD etc.) in fuel cell and hydrogen technologies (FCHT) across Europe.

TeacHy2020 will take a lead in building a repository of university grade educational material, and design and run an MSc course in FCHT, accessible to students from all parts of Europe. To achieve this, the project has assembled a core group of highly experienced institutions working with a network of associate partners (universities, vocational training bodies, industry, and networks). TeacHy offers these partners access to its educational material and the use of the MSc course modules available on the TeacHy site. Any university being able to offer 20 to 30% of the course content locally, can draw on the other 80 to 70% to be supplied by the project (and its successor entity that will support the platform post-project).

This will allow any institution to participate in this European initiative with a minimised local investment. TeacHy will be developing solutions to accreditation and quality control of courses, and support student and industry staff mobility by giving access to placements. Schemes of Continuous Professional Development (CPD) will be integrated into the project activities. We expect a considerable leverage effect which will specifically enable countries with a notable lack of expertise, not only in Eastern Europe, to quickly be able to form a national body of experts.

TeacHy will offer some educational material for the general public (e.g. MOOC's), build a business model to continue operations post-project, and as such act as a single-stop shop and representative for all matters of European university and vocational training in FCHT. The project partnership covers the prevalent languages and educational systems in Europe. The associated network has over 70 partners, including two IPHE countries, and a strong link to IPHE activities in education.

Deliverables Abstract

This deliverable was intended as a formal document for the factual accreditation of TeacHy modules with Continuous Professional Development (CPD) institutions. For reasons explained in the deliverable, the accreditation did not happen in the form envisaged for a number of reasons that are explored in this deliverable.

1 State of play in accredited CPD courses

There is a growing number of online courses available in Europe (and globally) that offer 'training' in hydrogen and fuel cell topics. They range from lunchtime free webinars to courses hosted by commercial education providers in lifelong learning at handsome fees.

Most of these courses offer no qualification, are primarily for information, and often serve to 'hook' participants onto further (paid) offerings of the institution providing them. Some claim to be 'certified' and hand out 'qualifications', based on certification of courses as available from a large number of 'certification bureaus' across Europe. These confirm, against payment, that courses are adequately equipped with staff and teaching material and that the teaching material fulfils minimum requirements. They do not make statements about the content of courses.

2 Recognised qualification courses

Few institutions have started to offer qualifications that are externally or internally recognised. One pathway is the 'recognition' of courses byt the German Industrie und Handelskammer (IHK) system. A course that is labelled as 'recognised by IHK' will have a involvement of the IHK in course quality assurance, but very limited influence excerted on content or organisation. There will, though, be a final assessment of participant success and the achieving candidates will receive their certificate from the local IHK branch in a small ceremony. These certificates are recognised in Germany as proof of a qualification. Other Member States have somewhat analogous arrangements, though in detail they will vary greatly. The Fraunhofer Gesellschaft in Germany follows a different pathway, by issuing a 'Fraunhofer Certificate' which is no generally accepted but due to the heavy weight of FhG runs a higher chance of having an impact on a CV than a certificate of an 'arbitrary' other provider.

3 Transferrable credit system in vocational training

The bottom line of all this is that there is a lack of a European 'microcredentials' system in professional education and training that would mirror the university Bologna system of ECTS points. The issue of how professional development measures can obtain a 'recognised qualification' status is one that the Hydrogen Europe Research / Hydrogen Europe Skills Working Group (to which UBHAM supplies one of two co-chairs) has identified as one that needs resolution in order to roll out a large scale re-/up-skilling initiative in fuel cell and hydrogen technologies in Europe. 2023 has been labelled 'Year of Skills' for the EU, with a focus on all kinds of education and training initiatives across all sectors. This gives us an opportunity to forward the topic of qualifications and their recognition, which the Skills working Group will be doing with a position paper to be forwarded to the Commission within 2023.

UBHAM is working with the German DVGW (Deutscher Verein des Gas- und Wasserwerks e.V.) in finding solutions to upgrading educational offerings in the professionals area by building networks of institutions that will mutually recognise qualifications, as a first step in getting these recognised by industry bodies, or even educational administration across Member States. First steps have been taken within the HyAcademy.EU initiative. part of this

work would be based on the TeacHy modules, as for instance the ‘Meister’ education in Germany, strongly supported by DVGW, results in an eqivalent qualifcation to a university MSc/MEng.

4 TeacHy CPD module accreditation

It has emerged that there is no need for a university module to be registered with any other institution than the university itself. Due to the Bologna System, the ECTS or credit points granted by a university should already be recognised Europe-wide (albeit some snags in the practical implementation). Fully developed microcredential systems are currently being discussed, in which regulation will be introduced to describe how ‘collecting’ credits can lead to enrolling on an MSc or other university qualification programme.

In fact, there is also no framework for a university to register CPD modules, as it per se already has the power to grant credit points and by way of constitutional arrangements provides ‘qualified’ degrees and training. Therefore the aim of Task 4.3 has been given up as far as the TeacHy project is concerned and moved into the future activities of the Hydrogen Academy.

5 National accreditation processes

5.1 CPD at ULB

The TeacHy programme of modules has been submitted for approbation by the Faculty council with Universite Libre de Bruxelles (ULB). It must go then through the life-long learning council, the academic council (University level) and finally the ARES (Académie de Recherche et d’Enseignement supérieur) of the French Community of Belgium to be fully recognised. The programme should start in September 2023.

6 Summary

Although many hydrogen and fuel cell training courses advertise themselves as ‘accredited’, they do not offer recognised qualifications, as in most cases the ‘accreditation’ is with private companies that in essence certify quality of delivery as such, but not the content, let alone the qualification obtained.

The mutual recognition of qualifications, e.g. through mircrocredentials systems, is currently a topic that is being discussed at a European level. In some Member States first systems exist, such as the IHK system in Germany, the DVGW qualification system, and the Wallonian ARES recognition.