Work based learning in the duality between school and enterprise in accordance with EQAVET principles
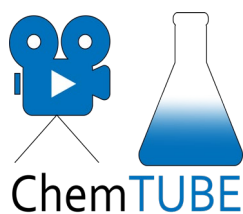
Output 11

Version 1.4 (May 2021)

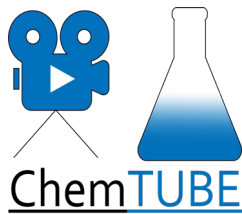## Author: Petra Ziegler (WIAB)

Deliverable Title	IO11 Work based learning in the duality between school and enterprise in accordance with EQAVET principles
Deliverable Lead	WIAB
Related activity/deliverable	IO2, IO4, IO5, IO6, IO7, IO10
Author	Petra Ziegler (WIAB)
Contributor	
Reviewer	Rolf Aslaksrud Kristiansen
Dissemination level	Confidential

Table of content

1 Introduction

The aim of this intellectual output (11) is to facilitate the interaction between schools and companies to secure that performance criteria are met through the implementation of work-based learning in a duality between the key players sharing responsibility and dividing tasks.

Work within this output will be structured and implemented in order to secure that the teaching-learning-recording-process complies with the overarching EQAVET principles for quality assurance.

To secure the necessary process and product quality WIAB, in cooperation with all partners, will take on the responsibility of following the project developments.

During this process, the partners will contribute to accomplish an internal product evaluation and quality safeguarding of

- the development process,
- test and implementation, and
- the project products

The quality assurance process within IO11 is set-up in a two-level way:

1. considering the EQAVET principles for work-based learning (WBL)
2. evaluation of the process and products of the ChemTube results (e.g. IO5, IO6, IO7 and IO10 – but also working with results from IO2, 3 and 4)

The following report brings together all activities on the quality of developments and implementation.
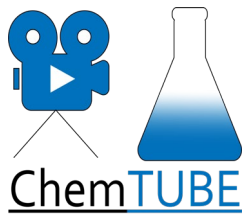
2 EQAVET and quality circle

2.1 EQAVET Framework

"The EQAVET Framework is designed to promote better Vocational Education and Training (VET) by providing authorities and VET providers with common tools for the management of quality in VET. Given the diversity and complexity of approaches to VET quality within and across Member States, the Framework offers a common point of reference to ensure transparency, consistency and portability between the many streams of policy and practice across Europe, in order to increase mutual trust and mobility of learners and workers (EQAVET 2012, 3)."

The EQAVET Framework is built upon six building blocks, that have been identified across Europe with regard to quality assurance for work-based learning (WBL):

> 1 Design work-based learning
>
> 2 Improve the quality
>
> 3 Respond to learners' needs
>
> 4 Communicate
>
> 5 Train the staff incl. staff exchange between school and workplace
>
> 6 Assess the learners (EQAVET 2012, 4 ff.)

The building blocks are designed to be useful and appropriate for the three main models of WBL:

1. **Apprenticeship schemes** which combine training in companies and VET schools or other education/training institutions;
2. **On-the-job training** in companies which typically covers internships, work placements or traineeships which are a compulsory or optional element of VET programmes leading to formal qualifications;
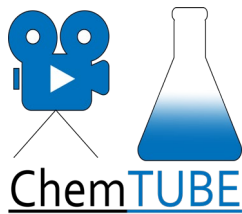
3. **Integration into a school-based programme** through on-site laboratories, workshops, kitchens, restaurants, junior or practice firms, simulations or real business/industry projects and assignments.[1]

The building blocks provide guidance and set out activities that help VET providers to develop and support a quality assurance approach for WBL in line with the EQAVET Framework. All these building blocks are supported by examples from European VET providers.[2]

2.2 EQAVET principles

Within the ChemTube project we use the EQAVET principles: Planning, Implementation, Evaluation and Review, which are connected to the PDCA-cycle (Plan-Do-Check-Act/Adjust).

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[1] See: https://www.eqavet.eu/Aligning-with-EQAVET/Work-based-learning/Bruges-communique (2020-04-24).
[2] See: https://www.eqavet.eu/EU-Quality-Assurance/Case-Studies (2020-04-30).

Figure 1
EQAVET principles

with clear, appropriate and measurable goals and objectives in terms of policies, procedures, tasks and human resources.

Planning and preparation

Implementation

with established procedures to ensure the achievement of goals and objectives.

Review

Evaluation

in order to achieve the targeted outcomes and new objectives - also as part of a broader dissemination and exploitation process.

through mechanisms for the evaluation of achievements and outcomes by collecting and processing data in order to make informed assessments.

Source: own depiction based on PDCA-cycle & EQAVET principles

The crucial phases within the ChemTube project that the activities focused on, were planning and preparation (phase 1), implementation (phase 2) and evaluation (phase 3). Review has been included in the first three phases and adaptations has been done according to needs arising.

Phase 1 "Planning and preparation" encompasses the following activities:

1. **Preparation of commitment and involvements**
    *   Securing commitment to the training programmes targeting critical skills and tacit knowledge among industry-based partners, including associate partners. Within **Intellectual Output 2** an analysis of critical skills and tacit knowledge has been conducted (see report by Jochen Seibold, March 2019). This also includes areas where critical skills and tacit knowledge have been identified within qualifications (Pharmaceutical Process Operator within the ChemPharmVET project as well as learning outcomes from the Pile-Up-Project). Also, within **Intellectual Output 3** a matrix was developed by Michaela Brokesova that clearly links learning outcomes with knowledge, skills and competence and the corresponding tacit knowledge or critical skills, respectively.
    *   Clarifying the duality school–company and the shared responsibilities for individual learners' progression and success in the WBL. Within **Intellectual Outputs 7 and 10** a training module and a handbook were developed that take this duality between school and company into account and highlight how the responsibilities are shared. Within **Intellectual Output 6** individual learners' videos have been produced and here the duality between school and company has been taken into account and made sure that learners receive the support they need.
    *   Underlining the potential benefits from participation in facilitating or delivering learning with provision, support and input to formal learning programmes as this will have a positive effect on employee progression, staff retention, access to new cohorts of potential employees, reducing skills gaps, etc.
    *   Adapting Memoranda of Understanding (MoU) and Partnership Agreements (PA) for the implementation of the WBL activities using the ECVET based YOMTOOL-templates and procedures, alternatively sourced from other organisations and experiences.

2. **Preparation of procedures**
    *   Capacity building among instructors, teachers and mentors involved to secure basic understanding of ECVET and the importance of critical skills and tacit knowledge in the professional performance of laboratory staff and process operators.

→ WIAB prepared a brief introduction to ECVET and learning outcomes (vs. learning objectives in curricula) as well as critical skills/tacit knowledge[3] (based on work done within IO2) that can be used in the workplace or a school setting in order to inform teachers, trainers and learners in a brief and efficient way (see Annex 4.1).

- A training session on video production was conducted in March 2019 in Dresden and a short evaluation was conducted in order to find out if the participants liked and benefited from the training and if all relevant topics were covered.[4]
- Technical preparation and training of teachers/mentors involved in the WBL to secure quality recordings from the micro-learning activities.
  → in spring and autumn 2020 there was the possibility for a videoconference-based learning activity, if needed, in order to support individual learners and their teachers/trainers with developing the individual skills performance videos.
  → WIAB produced a checklist (simplified guidelines on technical aspects) based on the document produced within **Intellectual Output 4.** The checklist brings together easy-to-understand information about the video production process and its technical aspects that can be used mostly by learners, but also by teachers/trainers. WIAB condensed the document from IO4 into a short technical checklist and consulted with Leif Erik Eriksson – the author of the report on IO4 – if the most important aspects were covered (see Annex 4.2).
- Structuring so that the teaching-learning-recording process complies with the EQAVET principles for quality.
  → this was done within the work of the IO11, by setting up a quality circle based on EQAVET principles.

Phase 2 "Implementation" includes the following tasks:

- Formalise the planned learning scenarios and the expected learning outcomes in ECVET based Learning Agreements (LA) based on the Memorandum of Understanding (MoU) and/or Partnership Agreements

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[3] The information can be found within IO10 Training Plan ChemTube.
[4] The results of the evaluation of the training session can be found within Ziegler (2019): Evaluation of training session on video production. Dresden, 20.-22.3.2019
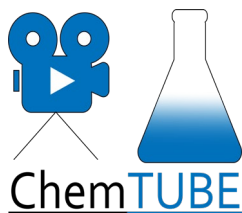
(PA) set out between the parties involved – the school, the company and the individual learner.
→ all partners collected existing MoU and LA or PA and the partnership consulted if the documents have to be adapted for the project.

- Identify the performance requirements and assessment criteria linked to the critical skills and tacit knowledge in focus and for recording.
→ WIAB prepared a checklist for best practice videos as well as individual learners for the video production process (see Annex 4.3 + 4.4), including e.g. tacit knowledge, critical skills covered; short description/ headlines/ keywords exist; technical aspects of video (audio quality/ video quality/ easy to understand) + content (relevant skills are showed, rating of the video). This checklist has been used within IO6 and the development of the individual learners' videos.

- Clarify and agree on how outcomes of the WBL can be validated and recognised in the process of a formal certification.[5]

- Securing that basic principles for privacy protection were taken care of as concerns possible distribution of individual video recordings according to the EU GDPR regulations.
→ template has been distributed by the project co-ordinator that has been adapted to the needs of this project.

- Where young people under 18 were involved, necessary authorisation of participation from their parents or those acting on their behalf was obtained
→ template has been distributed by the project co-ordinator that was adapted to the project's needs; took into account minors, but also companies and individual learners.

Within the implementation phase was important to take into account the situation with regard to **Covid-19** in the different partner countries throughout 2020 until the project ended in June 2021. In many countries in 2020/21, due to Covid-19 schools were operating only in a limited way (have been closed in all countries during spring and in many participating countries in autumn 2020 as well as spring 2021). Also, it was difficult to include the WBL aspects within the videos as companies were more and more reluctant to let students into their workplace and it was very difficult for students to get internships at all. The partnership consulted in autumn 2020 how the situation has evolved and decided to reassess the situation in early December 2020 in order to see if the individual learner videos can be finished until the end of

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[5] See IO10: Thingvold, Husevåg, Ziegler (2021): Training Plan ChemTube, chapter 3.

project in February or if an extension of the project was needed. In the end the partnership agreed to extend the project period until June 2021, so all videos could be finalised in a secure way.

Still, the best practice videos from Slovakia have been used during the lock-down by SIOV – the State Vocational Education Institute – in order to support distance learning. Videos are a great tool to use in these circumstances, so there are both challenges and opportunities with regard to the Covid-19 situation for the ChemTube project.

With regard to **assessment implementation** within phase 2, the following steps were taken:

- Recognition of (prior) learning has been implemented, using the link to the relevant learning outcomes in the qualification matrixes, primarily the ChemPharmVET, uploaded in Skillsbank, with the individual learner's self-assessment and the (external) assessors consolidated evaluation. The quality of a learner's experience and the accuracy and validity of their assessment is strengthened when there is a clear statement of which learning outcomes, standards or competences need to be demonstrated. This connection was clearly indicated for all videos. → matrix content + self-assessment within Skillsbank is available. In general, the idea is that videos are predominantly used to show performance of individual learners (especially in Corona-times). Videos can be an additional tool for skills documentation that might become more and more relevant in the future.
- Issuing the acquired certifications and documents after completed training cycle and assessments. → certificates and documents are being produced by national authorities, videos are meant as an add-on to show specific skills in order to support RPL.

Phase 3 "Evaluation" will encompass the following activities:

- Collecting information from all partners, using the provided checklists and identified quality criteria.

→ Processing all information and data and – if necessary – adapt documents or develop new tools for quality assurance (ongoing process throughout the project).

- Evaluation questionnaires were conduced several times: during the partner meeting and for the training session in 2019, at the end of the project (last partner meeting before the multiplier event in May 2021), and during the multiplier event in June 2021.

The final phase "**Review**" was based on the three previous phases and took into account necessary changes. How to introduce changes following the review has been considered during the early planning stage of designing this quality assurance approach. WIAB reviewed the results from the first three phases continuously and adapted accordingly, when and if needed; this was done as a reiterative process and as soon as improvements are identified, they were included within the templates, checklists, performance criteria etc.

To secure the necessary process and product quality WIAB, in cooperation with partners, took on the responsibility of following the project developments. During this process, the partners will contribute to accomplish an internal product evaluation and quality safeguarding of

- the development process,
- test and implementation, and
- the project products.

The final product of the quality assurance process is this report bringing together all information on the quality of developments and implementation (incl. all tools used, like checklists, performance criteria and/or brief questionnaires). The report has been updated on a regular basis.

3 Bibliography

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Ziegler, Petra (2019): Evaluation of training session on video production. Dresden, 20.-22.3.2019. Report

4 Annex Supporting Documents

4.1 ECVET

The **European credit system for vocational education and training** (ECVET) is one of the instruments of the European Union to help individuals transfer, recognise, and accumulate their assessed learning outcomes, to achieve a qualification or to take part in lifelong learning. ECVET uses flexible and individualised learning pathways, including transnational mobility. [6]
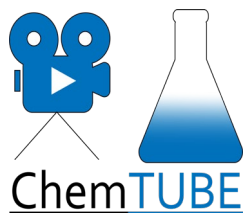
ECVET is based on the following principles:

1. Qualifications are to be described in units of **learning outcomes** (LO), therefore enabling a learner to build a qualification step by step in his/her own pace. The ECVET Recommendation from 2009[7] clearly distinguishes between the components of VET qualifications defined as learning outcomes and the components of formal learning programme or training provision known as modules.
2. Units of learning outcomes are assessed, validated, and recognised.
3. ECVET partnerships are supported by complementary documents, such as memoranda of understanding (MoU), learning agreements (LA), or personal transcripts of records (Cedefop 2016, 9).

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[6] See: https://www.cedefop.europa.eu/en/events-and-projects/projects/european-credit-system-vocational-education-and-training-ecvet (2020-05-19).
[7] See: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009H0708(02) (2020-05-19).

4.2 Video production, technical aspects (short checklist[8] based on IO4)

Location:

- Light: natural/extra light, location of light, avoid light coming from a single source, check that the recording area is illuminated consistently.
- Noise: open windows, traffic, talk outside the room etc. Maybe a separate recorder for the sound is needed?
- Interruption: e.g. people walking through, phones ringing, knocking on a door

Camera setup:

- check the battery status
- format the memory card(s)
- test recording first (check sound, exposure, focus) and adapt accordingly

Recording:

- look toward the camera, check if you are in the picture (frame)
- speak slowly and keep the language simple; ideally prepare a script/storyboard[9] beforehand what to say
- start with an "internal dialogue" of what will be presented
- if you need to move the camera/angle of the view or the recording subject, stop recording, adjust and continue
- avoid zooming, instead stop and restart recording
- usually you will have separate clips at the end, avoid confusion for post-processing by labelling the clips according to their sequence and content

Post-processing of recording:

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[8] For more details please see Eriksson, Leif Erik (2019): O4: Implementation and training of procedures for documentation of skills performance through video recording. Version 1.0
[9] For more details on the development of a storyboard please see Kristiansund Videregaende Skole (2020): O7 Training module, using video in training. Version 1.0, p. 6
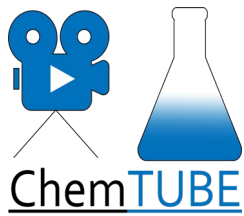
- check recordings on-set to see if they are okay
- make a backup to external drive/PC/cloud
- start editing rather soon (as long as the production process is still clearly in your mind)

Post-production:

- add intro & outro clip of ChemTube project
- add subtitles for translation
- upload video onto Skillsbank-website

ChemTUBE

4.3 Video production, content-related (checklist connected to IO5, IO7 & IO11): best practice

Quality Control Check	Tick box
Critical skills covered	☐
Tacit knowledge covered	☐
Content quality control	
It is clear which specific task/skill is being presented	☐
The video is presenting the task/skill in a competent way	☐
The video connects with the viewer	☐
The content of the video is clear is easy to understand	☐
Video is based on a storyboard	☐
There is a clear connection between a unit of learning outcome and the video	☐
There is a match between the title and the content of the video	☐
Good balance between talking and practical exercises	☐
Technical quality control	
Audio quality is good, e.g. content is easy to understand	☐
Video quality is good, e.g. light/sound/resolution is good	☐
Duration of the video is not too short, not too long (around 2 minutes)	☐
Intro/outro clip of ChemTube and Erasmus+ logo are included	☐
Video has average size, i.e. is not too big	☐
Post-processing	
Short description of video is available	☐
Keywords for video are available	☐
GDPR information is collected	☐

Please, add comments:

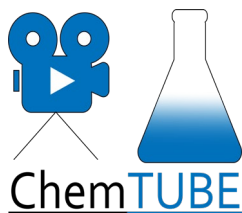_____

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4.4 Video production, content-related (checklist connected to IO6, IO7 & IO11): individual learner

Quality Control Check	Tick box
Critical skills covered	☐
Tacit knowledge covered	☐
Content quality control	
It is clear which specific task/skill the individual learner is presenting	☐
The video is presenting the task/skill in a competent way	☐
The video connects with the viewer	☐
The content of the video is clear is easy to understand	☐
The video has a clear structure (ideally some notes have been made before recording on content and timing)	☐
There is a clear connection between a unit of learning outcome and the video (*has to be defined by local ChemTube partner, not individual learner*)	☐
There is a match between the title and the content of the video	☐
Good balance between talking (or subtitles) and practical exercises	☐
Technical quality control	
Audio quality is good, e.g. content is easy to understand	☐
Video quality is good, e.g. light/sound/resolution is good	☐
Duration of the video is not too short, not too long (around 2 minutes)	☐
ChemTube/Erasmus+ logo is included at the beginning of the video	☐
Video has average size, i.e. is not too big	☐
Post-processing	
Short description of video is available	☐
Keywords for video are available	☐
GDPR information is collected	☐

Please, add comments:

_____

4.5 GDPR – EU General Data Protection Regulation
Skillstools Data Privacy Policy

Data Privacy[10] Acceptance

Using the Skillsbank systems[11] you will create a user account with relevant personal details. Your user data, your actions and the results of your actions will be stored within the system.

Use and Disclosure of Personal Data

Information stored in the Skillsbank system will exclusively be used in relation to your assessments and career development. Upon your own request your data may be passed on to third parties (guidance services or training providers). Your data will not be sold or distributed to other parties for other purposes.

Right to information

You are the owner of your own data. Upon request, all data which is registered are available for you and may eventually be deleted from the system.

Privacy Statement

By accepting the Privacy Policy you also confirm that you agree to the privacy policy statement for the operation of the Skillsbank systems.

Cookie-statement:

During this session your choices are temporarily stored to help the communication between you and the system. When the session is finished the interaction information is immediately deactivated and will not be used for any other purpose.

By clicking this button [I accept] you agree to the Data Privacy Policy as described in the Skillsbank data privacy policy statement.

For specific request contact the privacy.officer(at)skillstools.eu.

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[10] GDPR- compliant (GDPR: EU General Data Protection Regulation)
[11] The Skillsbank systems includes among others the Skillsbank platform and database, YOMTOOL, Skillstube, RefuSkills, RefuNEET, Chemtube, EGREEN, STEMSOFT,….

ChemTUBE
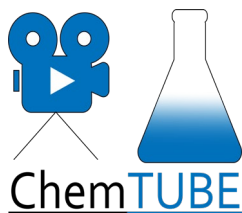
4.6 Data Protection Declaration for the Skillsbank System

1. Introduction

In the Skillsbank systems we store your personal data as you register them. This Data Protection Declaration gives more information about how we process your personal data in accordance with Norwegian personal data legislation, including GDPR (EU General Data Protection Regulation).

You are defined as the User, whereas NTI-MMM is the responsible owner of Skillsbank. In the following, you will also find contact information if you have any questions or wish to view the information we hold on you.

The Skillsbank systems may contain links to the sites of other providers and integrated services which are not covered by the Skillsbank Data Privacy Policy statement.

2. Who is responsible for handling your personal data?

NTI-MMM, Ryensvingen 2, 0680 Oslo, Norway

Data protection contact: privacy.officer(at)skillstools.eu

3. Use and disclosure of personal data

The purpose of storing personal data is related to assessment of qualifications, vocational skills and core work skills to create a personal CV (RefuPass and/or Europass document) showing individual skills profiles. Upon request of the individual user, data may be available to third parties like guidance services and training providers. The data will not be sold or distributed to other parties for other purposes.

Personal data is stored only in those cases where you as the user provides it, for example, when registering in a self-assessment module or ordering information material. A state-of-the-art encryption tool (Secure Sockets Layer, SSL) is used when transmitting personal data.

All data is stored within the European Economic Area (EEA). We take all steps necessary to ensure that your data is treated securely and in accordance with this privacy policy. Our data hosting partner do uphold a strict privacy policy.

Data will be stored as long as the individual user is active in the system. After two years of inactivity, the user may receive a request for deletion of the profile.
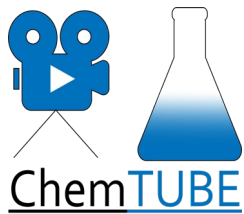
4. Your right to information

Based on the Norwegian Personal Data Legislation and GDPR, you may contact us at no cost if you have questions relating to the registration, processing or use of your personal information. You may at any time correct or delete your personal data and on request have your whole profile deleted.

5. Cookies/Information capsules

We use cookies for temporarily storing of information for the communication between the user and the system. Cookies recognise repeated use of our website by the same user/internet connection subscriber and are small text files that your internet browser downloads and stores on your computer or communication device. Their function is to improve the communication between you as user and our website and services. In most cases these are so-called "session cookies" to be deleted when you end the session and leave our website.
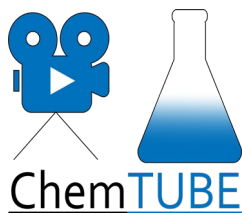
4.7 INFORMATION SHEET - ChemTube

ChemTube (like YouTube) is a video platform, that focuses on highlighting <u>vocational skills and competences</u>.

Access to **ChemTube** is restricted, so it is not openly available on the internet. Project partners of **ChemTube** (like SBG Dresden, Kristiansund Videregaende Skole, Stredni Prumyslova Skola Chemicka Brno or Zvaz Chemickeho a Framaceutickeho Priemyslu Slovenskej Republiky) as well as their students have access to the platform.

The vocational videos have the following purposes:

- Students can show what they are able to do. **They can use the videos for job applications with potential future employers.**
- Trainers can use the videos to highlight and document the learning success of their students.

ChemTube is still under development. Over the course of software development, videos are already being filmed. As soon as **ChemTube** is online, each participant can decide, if he/she would like their video to be publicly available on the internet or not.

Participating in the project is voluntary and free of charge!

If you would like to participate in the project, please fill in the following page.

MANY THANKS!
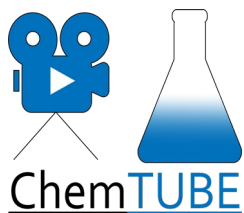
Registration form for participating in **ChemTube**

First name:

_____

Last name:

_____

Email-address:

_____

Subject area:

_____

Organisation:

_____

Please tick <u>one</u> option:

◯	Videos and photos taken during my participation within **ChemTube** will only be used in the framework of this project. I.e., videos will **not** be displayed publicly. Only selected personnel working directly for the project, will have access to the videos. Later, when **ChemTube** will be online, I will decide, if my video will be accessible to the public.
◯	I agree that videos and photos taken during my participation within **ChemTube** will not just be used within the project, but **also** on all communication channels (print, online or social media) of _____ (*please fill in the name of the participating partner*). This consent is valid until revoked.

Date: _____   Signature: _____

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