# Digital media and innovative technology in VET

**POLICY DEVELOPMENT**    PRACTICAL MEASURE/INITIATIVE    GERMANY

## Timeline

| 2015 Implementation | 2016 Implementation | 2017 Implementation |
| 2018 Implementation | 2019 Implementation | 2020 Implementation |
| 2021 Implementation | 2022 Implementation | 2023 Implementation |
| 2024 Completed | | |

**ID number 28138**

## Background

Learning with digital media is becoming increasingly important in the dual system, supporting cooperation between the different learning venues as an important prerequisite for the success of dual vocational education and training (VET). Cooperation is often made more difficult by the physical distance between the different learning venues: vocational school and company or inter-company training centre. The third virtual learning place makes it possible to learn and work with each other, independent of time and place. Digital media can also support access to education opportunities. Game-based learning, for example, picks up learners on the threshold between leisure and learning. The employability of individuals can be decisively improved through the consistent use of digital media for learning.

## Objectives

The aim of promoting digital media and innovative technology in VET is to raise the potential for teaching and learning using digital media, promoting the acquisition of digital media competence among apprentices and trainers, especially in small and medium-sized enterprises (SMEs). This strengthens initial and continuing VET and ultimately makes it more attractive.

## Description

The web portal, Digital media in VET, has provided information since 2015 on the use of digital media in VET and selected project findings. The portal offers a project database and map, including 222 projects in the following seven categories: didactics/methodology, learning in the work process, creation of content, learning location cooperation, competence assessment and documentation, mobile learning, and web 2.0.

The portal also features a selection of products developed by the funded projects that support digital key competences. Representatives of the funded projects can meet once a

year at the status conference eQualification.

Within the framework of the Digital media in VET funding programme, the BMBF has issued various funding announcements since 2007. The individual programmes are geared towards current and future developments in digital media in vocational qualifications, but also towards education policy requirements. Support is provided for projects that test cross-sectoral, digital training offers and reach a large target group in VET. The projects develop exemplary solutions for the use of digital media, Web 2.0 and mobile technologies in initial and continuing education and training practice. They also strengthen digital media competence and the dissemination of open education materials (OER) in VET.

The programme Digital media in VET ensures greater sustainability and innovation by promoting the use and effective transfer of project outcomes into VET practice; an example is the roadshow since 2016 that invites trainers to test the new instruments and to receive guidance. Among the projects supporting digital competences are:

(a) Blok, an online record of training which can be jointly and securely used by all stakeholders in dual training. This is an integrated development portfolio supporting relevant topics such as the transparent progress of learning objectives, strengthening of autonomy, and initiation of processes of reflection;

(b) Perspective 2.0, which is developing an online tutorial course in social media addressing trainers, educators and consultants working in job application and career entry;

(c) research project EPICSAVE, which uses a virtual-reality-based and serious-game simulation approach to prepare aspiring paramedics for otherwise barely trainable emergencies, particularly a life-threatening allergic shock in children.

Since December 2016, the funding priority Transfer networks for digital learning in VET (DigiNet) has promoted the establishment of sector-specific or regional structures for the implementation of digital learning in networks of companies, chambers and universities. The first networks started work in October 2017. More than 110 companies and organisations, many of them SMEs, will be funded until 2022 to support the development of digital skills in VET.

The BMBF announced in February 2017 the initiative Inclusion through digital media in VET, aiming to make it easier for people with disabilities to take part in IVET and CVET programmes with the use of digital media. Following the selection process, the first funded project started in October 2017. Most projects are funded until 2021.

In 2018, the funding priorities were the promotion of digital media in VET in the medical professions DigiMed and research projects on virtual and augmented reality in VET.

**2015  Implementation**

**2016  Implementation**

**2017  Implementation**

**2018  Implementation**

**2019  Implementation**

In 2019, more than 70 collaborative projects with over 300 individual projects were funded. The roadshow staged 22 events nationwide from 2016 to 2019, with more than 1 100 trainers have taking advantage of this offer.

**2020  Implementation**

In 2020, more than 75 collaborative projects with over 320 individual projects were funded, among them six new collaborative projects with a total of 27 partners from the health care professions. More than 1 100 trainers took advantage of the roadshow, Digital media in everyday VET, at 22 events nationwide. Due to the pandemic, none of the planned six on-site events could take place; instead,10 interactive webinars took place with approximately 300 participants.

In December 2020, the Federal Ministry of Education and Research (BMBF) published its yearly brochure with examples of the projects funded in 2020. This time, the focus was on gamification. The 2020 funded projects are presented in seven categories: virtual and augmented reality, digital networks DIGINET, inclusion, media competence and education, open educational resources (OER), refugees (DIMEBB), and digital media in health occupations.

## 2021 Implementation

In 2021, the project database of the web portal Digital Media in VET included 229 projects. For example, in the Masters of malfunction project (MARLA), a virtual reality (VR) learning application was developed in wind energy technology. Apprentices in electrical and metal engineering can train their fault diagnosis skills on a virtual offshore wind turbine. The project was awarded the main prize of the contest AVRiL 2021 – Successful VR/AR learning scenarios. At the end of 2021, the VR learning application MARLA was tested by apprentices at a vocational school. The status conference eQualification 2021 took place virtually in March 2021 and focused on gamification, in the sense of participation, interaction and inspiration.

## 2022 Implementation

The status conference eQualification took place in March 2022, during which BMBF-funded projects came into direct contact with actors from industry and VET with the aim of exchanging experiences and findings.

In 2022, after a break due to the pandemic, three roadshows on Digital media in everyday VET were held again in the presence of the participants. In practical user workshops, VET actors tested six innovative concepts using digital media in and innovative technology in initial and continuing training. The presence sessions took place in Mosbach, Bremen and Berlin.

With the funding from BMBF, the Federal Institute for Vocational Education and Training (BIBB) presented through the podcast series foraus.gehört (News for Training Practice), project results from the Digital media in VET funding programme from May 2022. Actors from the collaborative projects provide insights into the results of their work and present transfer possibilities for everyday practice. For example, in episode 12 of the podcast series, the CARO and CAROplusOnko projects detailed, which developed an application that can be used to design activating lessons in nursing. Teachers have a variety of digital interactions and sample lessons based on nursing didactics at their disposal.

## 2023 Implementation

The project database of the web portal Digital Media in VET included 229 projects in 2023. The projects developed exemplary solutions for the use of digital media, Web 2.0 and mobile technologies in initial and continuing VET practice (such as virtual and augmented reality or digital networks). In addition, digital media competence and the dissemination of open education materials (OER) in VET are promoted.

The last status conference eQualification 2023 took place in May 2023, during which BMBF-funded projects of the Digital Media in VET programme were presented.

In 2023, three roadshows of the transfer campaign Digital media in everyday VET took place in Nürnberg, Rostock and Bonn. The one-day events offered space for dialogue, networking and trying out digital tools and concepts, accompanied by the project managers. The roadshows addressed training staff from companies, inter-company training centres, vocational schools and educational institutions.

As part of the Excellence in VET initiative, the new Leando portal for VET trainers and examination staff (previously foraus.de) was launched on 20 November 2023. Leando serves as a central contact platform and provides information and continuing professional development on daily training practice and the examination system.

> ### 2024  Completed
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> In 2024, all information on the former web portal of the Digital media in VET initiative (qualifizierungdigital.de) and of the former trainer platform foraus.de have been integrated into the new Leando portal for training and examination staff.
>
> The new roadshow 'Leando on Tour - Tools for Training Practice' organised by the BIBB visited five locations (Hamburg, Karlsruhe, Stuttgart and twice Berlin). The roadshow presents the central services of the Leando platform for training and examination staff: Inform - Network - Qualify. In parallel workshops, participants have the opportunity to try out specific topics and methods for organising their own training practice, using suitable tools.
>
> For following up on future developments, please refer to the policy development 'Qualifying trainers for the future world of VET'.

## Bodies responsible

- Federal Ministry of Education and Research (BMBF) (until 2025)
- Federal Institute for Vocational Education and Training (BIBB)

## Target group

**Learners**

Learners in upper secondary, including apprentices
Learners with disabilities
Persons in employment, including those at risk of unemployment

**Education professionals**

Teachers
Trainers

**Entities providing VET**

Companies
Small and medium-sized enterprises (SMEs)
VET providers (all kinds)

## Thematic categories

**Modernising VET offer and delivery**

Diversifying modes of learning: face-to-face, digital and/or blended learning; adaptable/flexible training formats

Acquiring key competences

Integrating digital skills and competences in VET curricula and programmes

Reinforcing work-based learning, including apprenticeships

Supporting Centres of vocational excellence (CoVEs)

**Teachers, trainers and school leaders competences**

Systematic approaches to and opportunities for initial and continuous professional development of school leaders, teachers and trainers

Supporting teachers and trainers for and through digital

**Supporting lifelong learning culture and increasing participation**

Promotion strategies and campaigns for VET and lifelong learning

Financial and non-financial incentives to learners, providers and companies

Ensuring equal opportunities and inclusiveness in education and training

# European priorities in VET

**VET Recommendation**

> VET as an attractive choice based on modern and digitalised provision of training and skills

**Osnabrück Declaration**

> Resilience and excellence through quality, inclusive and flexible VET

> Establishing a new lifelong learning culture - relevance of continuing VET and digitalisation

> Sustainability - a green link in VET

# Subsystem

IVET CVET

# Further reading

Leando platform for training and examination staff (previously foraus.de)

Roadshow Leando on tour - tools for training practice (2024)

Conference eQualification 2023

# Related policy developments

2025  **Implementation**

## The Excellence Initiative for VET

With the Excellence Initiative for VET policy projects are combined into an overarching agenda. Individual activities will be launched successively during 2022 to 2026. Over EUR 750 million have been earmarked for this purpose.

🇩🇪 GERMANY

**Type of development**
Strategy/Action
plan

**Subsystem**

IVET CVET

**2025 Implementation**

## Supporting excellent inter-company training (ÜBA) and CoVE centres (ÜBS)

The Federal Ministry of Education and Research (BMBF) initiated the programme of promoting digitalisation in competence centres and inter-company training centres in 2016.

GERMANY

**Type of development**

Practical
measure/Initiative

**Subsystem**

IVET CVET

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**2025 Implementation**

## Supporting SMEs to provide future-proof VET

Under the umbrella initiative, VET 4.0, the Federal Ministry of Education and Research (BMBF) initiated a special funding line (Initial and continuing vocational training in the economy 4.0 – Support structures for SMEs in the adaptation process of in-company training) within the JOBSTARTER plus

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**Type of development**

Practical
measure/Initiative

**Subsystem**

IVET CVET

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**2025 Implementation**

## Qualifying trainers for the future world of VET

Since 2015, BIBB has funded eighteen 'VET for sustainable development' projects (BBNE). They experimented and evaluated relevant curriculum concepts, digital teaching, learning materials and examination questions on green skills for initial and continuing VET, e.g.

GERMANY

**Type of development**

Practical
measure/Initiative

**Subsystem**

CVET

`2025` **Implementation**

## Digital education and upskilling of VET teachers

Under its *Digital pact for schools* programme (2019-24), the Federal Government aims to fund the digital infrastructure in all German schools, including vocational schools, to promote the uptake of digital skills.

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**Type of development**

Practical
measure/Initiative

**Subsystem**

IVET CVET

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`2025` **Implementation**

## Promoting innovations for excellent VET - InnoVET programmes

In January 2019, the Federal Ministry of Education and Research (BMBF) launched the project Shaping the future – innovations for excellent vocational training (InnoVET) and ran the first call.

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**Type of development**

Practical
measure/Initiative

**Subsystem**

IVET CVET

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`2022` **Completed**

## VET 4.0 project: effects of digital innovation on vocational training

The Federal Ministry of Education and Research (BMBF), in cooperation with the Federal Institute for VET (BIBB), started the initiative VET 4.0 for the period from February 2016 to April 2018. The initiative is based on three pillars.

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**Type of development**

Practical
measure/Initiative

**Subsystem**

IVET CVET

# National Skills Strategy

In November 2018, the Federal Ministry of Labour and Social Affairs (BMAS) and the Federal Ministry of Education and Research (BMBF) launched a committee to develop a National continuing education strategy (*Nationale Weiterbildungsstrategie*).

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**Type of development**

Strategy/Action
plan

**Subsystem**

CVET

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