



Increase
Digital
Competences
to Promote Inclusion

InDiCo - Increase Digital Competences to Promote Inclusion

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Status quo of the EU DigComp framework implementation

**Country Report
Germany**



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Authors of this report:

Vanessa Rapp, Michael Backhaus and Lea Busché (Mariaberg e.V.)

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1 Introduction

The European Commission's (2023) targets for the digital decade envisage that at least 80% of those aged 16-74 shall have at least basic digital skills by 2030. DigComp 2.2, the digital competence framework for citizens (Vuorikari et al., 2022), which allows the categorisation and comparability of digital skills on eight levels, plays a key role in the European Commission's digital strategy.

Although the DigComp framework includes basic digital competences at levels 1 and 2, and the digital strategy aims for 'digital skills for all', persons with learning difficulties (PWLD) are at risk of exclusion. In the InDiCo project we agreed on using the term 'persons with learning difficulties' instead of 'persons with intellectual disabilities' to describe persons who experience challenges in all areas of life due to intellectual difficulties.

'Learning difficulties' encompass a range of challenges with regard to learning arising from various factors which can be genetic, neurobiological, cognitive, motivational, affective, or socioeconomic factors. It includes both general learning deficits and specific disorders like reading, spelling, or arithmetic difficulties. Diagnosis and intervention must be tailored to the individual, with some factors being more modifiable than others. Terminology and policies surrounding learning difficulties vary widely across regions and educational systems. Contemporary definitions are largely descriptive, focusing on addressing the specific needs of individuals to facilitate their learning progress in all areas of life (Lenhard & Lenhard, 2013).

Often training programmes are inaccessible to them, or the adult learning and education staff who support and accompany PWLD have low digital competences themselves. Against this backdrop, the InDiCo project aims for a clearer understanding of the competences required by PWLD in their digital interactions, a competence-based approach for adult learning and education staff in the assessment and training of digital competences, and improved validation of digital competences in connection with the DigComp framework.

One step to reach these aims is to examine the current state of digital inclusion of PWLD in relation to the DigComp framework, specifically in relation to proficiency levels 1 and 2. In six reports (for Austria, Germany, Greece, Portugal, and Spain, and the pan-European level) the extent to which 'digital skills for all' with regard to PWLD has already been achieved is explored.

As an introduction to this report, DigComp is briefly explained and the central concepts of assessment and validation are introduced, followed by an explanation of the methodology.

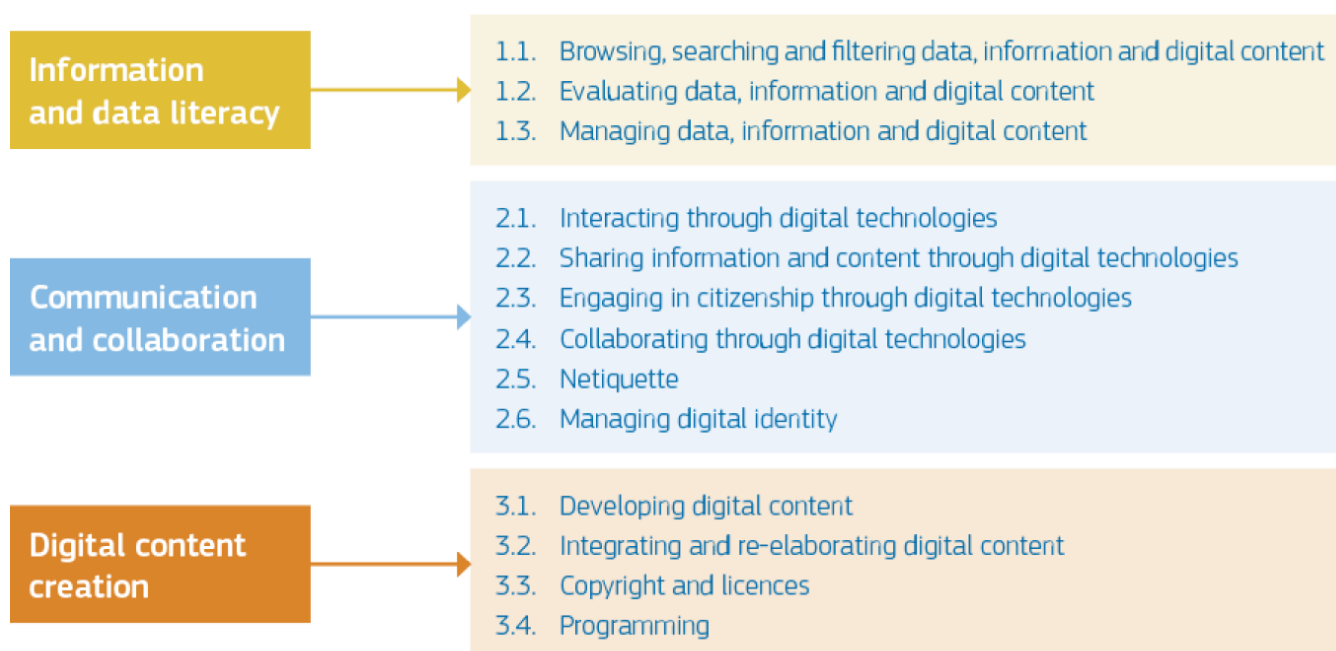
DigComp 2.2: The Digital Competence Framework for Citizens

DIGCOMP, a framework for developing and understanding digital competence in Europe, was first published in 2013 (Ferrari, 2013). Digital competence has been acknowledged as one of the

eight key competences for Lifelong Learning by the European Union. Digital competence can be broadly defined as the confident, critical and creative use of information and communication technology to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society (p. 2). The DIGCOMP framework aims to support the development of digital competence of individuals in Europe and represents an attempt to allow for self-assessment based on five areas of digital competence and three proficiency levels (p. 14) and presents a detailed framework with an in-depth description of the different aspects of 21 digital competences (pp. 15–36).

The latest version to date is DigComp 2.2, the digital competence framework for citizens (Vuorikari et al., 2022). It is an EU-wide tool to improve citizens' digital competence, help policy-makers formulate policies that support digital competence building, and plan education and training initiatives to improve the digital competence of specific target groups (p. 2). The DigComp framework provides a common language to identify and describe the key areas of digital competences – information and data literacy; communication and collaboration; digital content creation; safety; and problem solving – in terms of knowledge, skills, and attitudes (p. 3). The use of agreed vocabulary allows to consistently apply the competence-based approach to instructional planning, assessment and monitoring (p. 4) “Ultimately, it is up to the users, institutions, intermediaries or initiative developers to adapt the reference framework to their needs when tailoring interventions (e.g. curriculum development) to fit the specific needs of target groups” (p. 4).

The DigComp 2.2 encompasses five competence areas with a total of 21 competences and eight proficiency levels (p. 4):





As mentioned above, the InDiCo project puts proficiency levels 1 and 2 to the fore as these are the basic levels (“foundation”). Proficiency level 1 and level 2 are distinguished by the degree of guidance needed. The following example derives from competence area 2, which is “Communication and collaboration” and is given for competence 2.4 “Collaborating through digital technologies” (p. 21):

FOUNDATION	1	At basic level and with guidance, I can:	<ul style="list-style-type: none"> choose simple digital tools and technologies for collaborative processes.
	2	At basic level and with autonomy and appropriate guidance where needed, I can:	<ul style="list-style-type: none"> choose simple digital tools and technologies for collaborative processes.

In the framework, selected examples of learning outcomes in the form of knowledge, skills and attitudes are given, and selected examples of “use cases”, either from an employment scenario or a learning scenario, are presented (e.g., pp. 12–13).

Assessment and validation of learning outcomes

Validation of non-formal and informal learning (VNFIL) can be conceptualised as a powerful tool to support disadvantaged and vulnerable adults, highlighting the importance of introducing and advocating for alternative pedagogical approaches where the assessment and validation of (prior and in situ) learning is seen “as a learning process” (Andersson, 2017), rather than a policy-driven summative assessment and certification for capacity building purposes. VNFIL prioritises and places the individual at the centre (Villalba-García, 2021, p. 357).

With this in mind, and in view of the project's objectives, two key concepts need to be highlighted:

- Validation means a process of confirmation by an authorised body that an individual has acquired learning outcomes measured against a relevant standard and consists of the following four distinct phases: identification, documentation, assessment, and certification (Cedefop, 2023, p. 9).
- Assessment is normally referred to as the stage in which an individual's learning outcomes are compared against specific reference points and/or standards. It needs to be designed to capture and assess the learning specific to each individual, so various tools need to be considered. In some cases, written tests will be sufficient; in other cases, demonstrations, practical tests and evaluation of other forms of evidence will be required (p. 16).

The InDiCo project considers the DigComp framework as a relevant standard for the assessment and validation of learning outcomes. However, we also intend to include competences required by PWLD in their digital interactions, thus prioritising the learner's voice and putting the individual at the centre. We also recognise the value of other relevant frameworks, such as the UNESCO (2021) framework for media and information literacy.

Methodology

Drawing on qualitative social research (Given, 2008) and addressing the digital inclusion of PWLD as a social issue (Bloor, 2011), the following research questions guided the data collection and analysis process to gain an understanding of the current state of digital inclusion of PWLD in relation to the EU DigComp framework, specifically in relation to proficiency levels 1 and 2. The findings are presented in six reports (for Austria, Germany, Greece, Portugal, Spain, and at a pan-European level).

- How is the EU DigComp strategy implemented? Does a national DigComp framework exist or is it being developed? How is the national framework linked to the National Qualifications Framework (NQF)? And: What is the current state at the pan-European level?
- Are there any gaps or challenges in the implementation of the DigComp strategy/framework at levels 1 and 2?
- What bottom-up initiatives are working towards the digital inclusion of PWLD with a focus on promoting digital competences at levels 1 and 2?

The following data collection steps were taken:

- We conducted web searches for policy papers, reports, studies and information on policy-driven projects, as well as information on relevant bottom-up initiatives for PWLD (project websites, evaluation reports and the like) based on relevant keywords, screened the content, and documented these materials (Prior, 2011, p. 95).

- We have used the following search terms, among others, and in various combinations: digital inclusion for all; digital competences; digital skills; digital literacy; digital initiatives for PWLD; adult basic education; National Qualifications Framework; and validation of non-formal and informal learning;
- We surveyed the project's associated partners and identified key informants (Fetterman, 2008), in particular policy makers, digital strategy experts, PWLD providers, and validation experts, through the web searches.
- Drawing on a question-based interview guide (Morgan & Guevara, 2008), we conducted interviews with selected key informants. Together we explored the effectiveness of (national) strategies for enhancing digital competencies, particularly focusing on initiatives for PWLD, and delved into the challenges and (possible) key stakeholders to (further) promote digital inclusion, and explored issues of assessing and validating digital competencies for PWLD and strategies to ensure their inclusion in digital environments.

For the data analysis process, we selected the most relevant documents in terms of understanding the current situation and included the recorded key informant interviews as the base material for analysis.

We followed the method of qualitative content analysis (Julien, 2008) and applied a basic form of interpretation, the “summary”. The objective of such a “summary” is to “reduce the material in such a way that the essential contents remain, in order to create through abstraction a comprehensive overview of the base material which is nevertheless still an image of it” (Mayring, 2014, p. 64).

In order to provide answers to the research questions, we analysed the base material and identified the key messages that emerged from the documents and the key statements or comments that emerged from the interviews as the basis for this report to shed light on the status quo of the digital inclusion of PWLD in relation to the EU DigComp framework, specifically in relation to proficiency levels 1 and 2.

2 Implementation of the EU DigComp strategy with regard to PWLD

The following section will focus on the extent to which Germany is implementing the EU Digcomp strategy to their national digital strategy. In particular, it will show that Germany has recognised that digitalisation is crucial for our future viability as a country. The following section will look specifically at the national strategy in Germany and its initial implementation, as well as the efforts in relation to our target group PWLD.

National digital strategy in Germany

As Europe's industrial engine and one of the strongest economies in the world, but also as a social market economy with a claim to participatory justice, Germany considers digitisation to be crucial for the future viability (BMDV, 2023). Nevertheless, Germany only ranks 13th out of 27 EU member states in the European index for the digital economy and society. This should improve with the implementation of the planned measures so that it is among the top 10 (p.3).

Germany's 'Digital Strategy' (Digitalstrategie) is an umbrella strategy that sets out the overarching framework for digital policy in Germany. It guides the ministries in the implementation of their respective strategies and measures. The aim of the strategy is to improve the framework conditions and contribute to ensuring that the digital transformation can be shaped in a gender-equitable and non-discriminatory manner in the interests of a sustainable, diverse, inclusive and democratic society, and that civil society, the economy, education and science can use the opportunities offered by digitalisation and the possibilities for shaping the digital transformation in the interests of people (pp. 4-5).

With regard to digital education, the list of outcomes to be achieved by 2025 includes the creation of an interoperable education ecosystem that provides equal opportunities and barrier-free access and is actively used by people at all stages of life (p. 2). The education policy process for the development of a digital education area will also be driven by a National Education Platform (NEP) (p. 14).

The National Education Platform, also known as 'My Classroom' (Mein Bildungsraum), connects existing digital education programmes and administrative processes in the education sector. This networking creates a digital educational space that provides secure access and transitions, removes barriers and thus supports learners individually. It can also simplify administrative processes in education for learners (Mein Bildungsraum, 2024).

In order to identify and improve digital skills, the National Digital Strategy provides for regular monitoring of the digital skills of the population.

The results of the monitoring, combined with research and practice development, will be used to develop targeted measures for groups at increased risk of being left behind digitally (BMDV,

2023, p. 15-16). There is no reference to the EU DigComp strategy in the Digital Strategy for Germany.

Upon analysis of the interviews with our key informants, a relatively consistent picture emerged. With regard to the 'digital strategy' (Digitalstrategie) and its approach, political representatives and those occupying leading positions were particularly unified and resolute in their opinions. Germany has a number of programmes and initiatives in place with the objective of promoting digital skills amongst its citizens. One national strategy that coordinates these efforts in the context of healthcare is the 'Digital Supply Act' (Digitales Versorgungs-Gesetz). The 'Digital Supply Act' which was enacted in 2019, has the objective of accelerating the digitalisation of the healthcare sector by facilitating the utilisation of digital applications and telemedicine, among other measures (BM für Gesundheit, 2024).

The joint project: 'Digital Germany' (Digitales Deutschland)

The project 'Digital Germany | Monitoring the Digital Skills of the Population' (Digitales Deutschland | Monitoring zur Digitalkompetenz der Bevölkerung) was launched to achieve the goals set out in the Digital Strategy. Digital Germany collects and analyses data on the media and digital skills needed by the population to live confidently in the face of digital change. The aim of the project is to create a basis for promoting the skills of the population as a whole in the face of digitalisation. Digital Deutschland compiles studies and specialist literature in a database and develops further empirical studies and expert reports (Digitales Deutschland, n.d.).

The Compass: Artificial Intelligence and Competence 2023 - Attitudes, Behaviour and Competence Development in the Context of AI' (Der Kompass: Künstliche Intelligenz und Kompetenz 2023 – Einstellungen, Handeln und Kompetenzentwicklung im Kontext von KI) serves to support the German government's digital policy and is the basis for good and holistic competence development. It identifies competence dimensions (Cousseran et. al., 2023, p. 16), which are organised as follows:

- Instrumental skills dimension: This includes the operation of digital media and systems.
- Cognitive dimension: This includes cognitive engagement with digital media and systems, such as media knowledge and awareness, and visual literacy.
- Affective dimension: This emphasises the management of emotions that arise when using media (e.g. empathic behaviour).
- Creative dimension: This emphasises self-determined, independent and creative use of media.
- Social dimension: This includes the skills and abilities individuals need for collaboration, participation and digital communication.

- Critical-reflective dimension: This includes skills that enable people to view and evaluate media critically, both in relation to society and to their own lives.

The dimensions mentioned are interrelated, build on each other and sometimes overlap. However, they serve to provide an overarching view of the abilities, skills and knowledge formulated in the different competence concepts.

The report on the second representative survey of the joint project 'Digital Germany' (Digitales Deutschland) provides an overview of how competent the German population considers itself to be in dealing with digital media and AI systems. In line with the German government's digital strategy, the study thus helps to provide an overview of the existing digital skills of the population. The study also highlights background information that may be important for the development of digital and media skills. As part of the 'Digital Germany | Monitoring Digital Literacy' project (Digitales Deutschland | Monitoring zur Digitalkompetenz), the report also takes into account socio-demographic characteristics such as age, gender, formal education and occupational sector where these play a role in the development of skills (Cousseran et. al., 2023, pp. 9-11).

However, there is no indication in this publication that PWLD were also considered as part of the study.

Moreover, the key informants stated that there are numerous programmes and initiatives at the federal and state levels in place with the objective of enhancing digital participation and skills among citizens. Examples of such initiatives include the 'Digital Pact for Schools' (Digitalpakt Schule), which is part of Germany's digital strategy (p. 13) and provides financial and other support to foster the digitalisation in schools, and the initiative 'Digitale Dorflinde', which is funded by the Hessian Ministry for Digitalisation and Innovation and promotes digital accessibility for Hessian municipalities (Digitale Dorflinde, n.d.).

Digital inclusion of persons with learning difficulties and other disabilities

During our research, we observed that although the PWLD target group is referenced and alluded to in numerous documents, strategies and initiatives, it is not addressed in any more detail. Nevertheless, the German government has set out a digital strategy with the intention of ensuring participation, equality and digital accessibility. It is therefore necessary to facilitate the dissemination of knowledge in order to enhance the quality of life of the general public. This should be achieved by making people's everyday lives simpler, more sustainable, safer, more accessible and more social.

Concurrently, it is of paramount importance to ensure the protection of individuals and groups susceptible to exploitation when implementing digitalisation. The aforementioned vulnerable groups include, in particular, children and young people, women, older people, people with disabilities, LGBTQI+, and people with a history of immigration (BMDV, 2023, p. 27).

The analysis of our interviews with key informants indicates that, when asked about initiatives for PWLD, reference is ultimately always made to generally applicable principles, which of course also officially apply to people with disabilities. In Germany, for instance, the ‘Digital Accessibility Action Plan’ (Aktionsplan für digitale Barrierefreiheit im Web) has been implemented with the objective of enhancing the accessibility of digital products and services for individuals with disabilities. The action plan encompasses a range of measures, including the promotion of accessible websites, apps, and other digital content; the provision of training and support for developers and designers to ensure that digital products take the needs of all users into account; and the implementation of accessibility standards for digital products. In this context, the mandate holders also refer to the increasing prevalence of the use of easy-to-understand-language and other accessibility tools in the design of websites (Taubenschlag, 2023).

Furthermore, numerous non-profit organisations and initiatives are dedicated to the digital integration of individuals with disabilities. Examples include ‘Action human’ (Aktion Mensch) and ‘Accessibility on the Internet’ (Barrierefreiheit im Internet). Such organisations frequently provide training, advice and assistance to individuals with disabilities, as well as to companies and organisations, with the objective of ensuring that digital products and services are accessible. (BMAS, 2016)

In Germany, there are also legal regulations that promote digital accessibility. These include the ‘Act on Equal Opportunities for People with Disabilities’ (Behindertengleichstellungsgesetz) and the ‘Accessible Information Technology Ordinance’ (Verordnung zur barrierefreien Informationstechnik), which set out requirements for the accessibility of websites and other digital offerings.

In summary, a number of initiatives and measures have been implemented in Germany with the objective of promoting digital inclusion for all, including those with disabilities. Nevertheless, it was crucial to ascertain that this pertains more to general regulations and that individuals with disabilities, including PWLD, are not the primary focus, but are generally included. Furthermore, PWLDs are not an explicit part of the German Digital Strategy, which aims to promote digital skills among the German population.

3 Gaps and challenges in the implementation at levels 1 and 2 with regard to PWLD

During the research, it became evident that the EU DigComp strategy is not widely known, and therefore no answers can be provided here. This is evidenced by the online questionnaire and inquiries from our key informants.

Although the Federal Ministry for Digital and Transport is the leading agency for the German Digital Strategy, it reported that it was not aware of the EU DigComp strategy. With regard to the target group PWLD the Federal Ministry for Digital and Transport indicated that the Federal Ministry of Labour and Social Affairs was the appropriate contact given that the target group and the topic in question were located there. The topic was subsequently referred to the relevant department, but no feedback has been forthcoming to date.

In their research study, Kalcher & Kreinbacher-Bekerle (2021) were able to identify a number of risks, including the following:

Persons with disabilities, including PWLD, who are employed in vocational training or a workshop for the disabled require staff who are able to teach digital skills. In contrast, the risks associated with digital media are often prioritised by specialists over the provision of assistance in dealing with such technologies. Moreover, staff must be trained to convey digital skills in a clear and accessible manner.

In this context, it is of interest to note that there is a discrepancy between the strategic policy level intentions to promote the country's digital development and the actual implementation in practice. In particular, the expert from vocational training for people with disabilities reported that the workforce is relatively older and, although not universally, rather negative towards digitalisation. This has led to an increased focus on traditional forms of communication and teaching, and a rather negative attitude towards digitalisation efforts.

Moreover, the ability of individuals to utilise digital media in a self-determined manner within their private lives is often perceived by numerous institutions as a matter of secondary importance.

Furthermore, it is challenging to ensure uniformity in standards, as the potential outcomes and opportunities are contingent upon contextual factors such as the labour market, degree of disability, age and living and housing situation.

As an illustration of the disparities observed between age groups Kalcher & Kreinbacher-Bekerle (2021) found that 67% of individuals with learning disabilities between the ages of 14 and 49 own a smartphone, in contrast to only 25% of those aged 50 and above.

Nevertheless, the question of the drivers for development and the necessity to close the existing gaps also reveals the shortcomings of subsidiarity development as prescribed by law in

Germany. The implementation of digital inclusion for all, particularly with regard to levels 1 and 2 (barrier-free design of digital products and services as well as training and awareness-raising), necessitates the collaboration of a multitude of stakeholders and interest groups (Kalcher & Kreinbucher-Bekerle, 2021). The following key stakeholders are involved:

- Governments and regulators
- Companies and technology providers
- Non-profit organisations and advocacy groups
- Educational institutions

As our key informants have indicated, all of these stakeholders are involved in successful development and must work together in a manner that is as smooth as possible in order to facilitate the promotion of appropriate development. Those involved in this field of study believe that the considerable diversity and complex structure of federalism contribute to the slowness and difficulty of development, given that different departments are anchored in different ways. Consequently, experts in the field of education for PWLD have identified these challenges as significant obstacles to the development of corresponding digital skills.

The absence of standardisation and harmonisation in the field of digital accessibility has resulted in the emergence of inconsistencies in the implementation of digital products and services and can result in the lack of interoperability between digital products and services, thereby rendering them inaccessible to individuals with disabilities.

The paucity of resources and funding is a further impediment to the advancement of digital accessibility. Organisations and companies may be constrained by limited resources and funding when it comes to conducting digital inclusion training and awareness campaigns, or integrating accessible design into their development processes.

A further challenge is the lack of sensitisation and awareness. There is a dearth of awareness among developers, designers, decision-makers and end users alike of the importance of digital inclusion and accessibility.

Technological challenges: The accelerated pace of technological advancement presents a challenge for maintaining the currency of accessible design and ensuring the accessibility of digital products and services to all users.

The existence of legal and regulatory hurdles represents a further challenge to the implementation of accessible design and digital inclusion. The implementation of accessible design and digital inclusion is hindered by legal and regulatory constraints. This can be attributed, for instance, to the existence of ambiguous or conflicting regulations pertaining to accessibility.

4 Bottom-up initiatives working towards the digital inclusion of PWLD

By bottom-up initiatives, we mean activities and projects that are developed and implemented 'from below', by practitioners who have acquired relevant expertise in working with marginalised and vulnerable target groups, in particular with PWLD.

A number of projects and initiatives pertaining to digital learning for PWLD, as well as for other vulnerable groups, including refugees, older people and individuals from educationally disadvantaged backgrounds, have been operational for several years.

DIDAB

DIDAB is a digital learning platform for people with disabilities. The learning environment offers a multitude of interactive learning units that employ the use of videos, images and quizzes to convey a plethora of everyday topics and professional skills in an engaging manner. The project was initiated by gdw nord with the objective of securing long-term employment opportunities for PWLD, shaping them in a future-oriented manner and providing them with the requisite qualifications. The main features of the DIDAB learning platform are:

- **Multimedia learning content:** DIDAB offers nearly 400 learning units covering topics from everyday life and professional qualifications. This content is presented in an interactive and multimedia format to make the learning process engaging and effective.
- **Ease of use:** The platform is intuitive and easy to navigate so that users can access it regardless of their device (PC, tablet or smartphone). This promotes learner autonomy and enables self-directed learning.
- **Personalisation:** The "My institution" feature allows organisations to customise the platform to their specific needs, upload their own learning materials and create a personalised space. With "unika", DIDAB also offers the possibility to create your own learning platform based on DIDAB.
- **Innovative education:** DIDAB combines modern educational technologies with the special needs of people with disabilities. The platform uses storytelling, videos, explanatory films and interactive quizzes to convey knowledge clearly and motivate learners (Deutscher Bildungsserver).
- **Up-to-date and expandable content:** The learning content is continuously expanded and updated to provide up-to-date information and exercises. The platform also offers regular webinars and workshops to deepen and extend the learning content. It is important for our target group that the website is also available in easy-to-understand-language and that videos and tools are designed to make it easier for PWLD to use the website.

Find more online (in German): <https://www.didab.info/>

Code Up

The Code Up project aims to provide digital skills, including the safe use of computers and email, as well as more advanced IT skills. The project aims to reach people from disadvantaged backgrounds. The aim is that the skills acquired will facilitate successful integration into the world of work. Code Up offers a variety of programmes and workshops tailored to different target groups. Both face-to-face and online workshops are offered to train teachers and students in coding, algorithmic thinking and digital media skills. Schools can book project days where students are introduced to digital topics in a practical and interactive way. Programmes such as Digi aim to fully support schools in their digital transformation (Coding for Tomorrow) (Digi-Edu).

Code Up provides teachers with a wide range of educational materials designed specifically for use in digital education. These include teaching units, checklists and tooltips to facilitate the integration of digital skills into subject teaching (DigiBitS). The mission of Code Up Digital Education is to prepare children and young people for the demands of the digital future. By teaching future skills and encouraging a critical and creative approach to digital technologies, the aim is to shape tomorrow's education today (Coding for Tomorrow).

A specific feature of Code Up is the use of innovative teaching methods that focus on interaction, gamification and practical application. The aim is not only to transform teaching digitally, but also to increase the motivation and interest of students (Coding for Tomorrow), which can be attributed to our target group (DigiBitS). However, you have to log in to the search function and there are no references to easy language.

Find more online (in German): <https://codeup.space/>

‘Expressive’ (Ausdrucksstark)

The project entitled ‘expressive’ (Ausdrucksstark), funded by the association Aktion Mensch, has spent almost two years developing concepts for active media work with young people with and without disabilities. It has also implemented and evaluated 12 model projects in the areas of video, audio and multimedia with various cooperation partners.

The equal participation of people with disabilities in media education programmes and facilities is a relatively novel undertaking. The term "integrative media education" represents a significant educational field of action, in which attempts are made to create opportunities for joint activities for children and young people with and without disabilities. This can facilitate the realisation of mutual social integration of adolescents with and without disabilities. It also offers new opportunities for media education, but is not specifically designed for PWLD only.

You can find a bit more online at the following link:

<https://www.jff.de/veroeffentlichungen/detail/ausdrucksstark>

(The website refers to the detailed book about the project)

Online self-assessment tests for digital literacy

With regard to self-assessment of digital skills, during the screening we identified some companies that offer online self-assessment or self-assessment tests. These are mainly used in the context of vocational aptitude diagnostics or other HR issues and are less suitable for the PWLD target group. Nevertheless, they are mentioned here as a way of assessing digital skills.

The DigCompCheck (DCC) from *gepedu* measures digital competence in a very detailed and valid way by means of an online self-assessment and the verification of this self-assessment through knowledge questions. The DigCompCheck is based on the European Union's Digital Competence Framework 2.1 and has been expanded to include practical requirements such as basic IT and computer skills. The test procedure can be used in self-assessment, in personnel selection or in personnel development, for example to sensitise employees to the topic or to identify training needs.

Further information (in German): <https://www.gepedu.de/digitale-kompetenz#framework>

The Digital Competence Check (DCC-SAT) of the CJD also offers an online self-assessment test to determine the level of digital competence. The Digital Competence Check (DCC-SAT) is divided into six competence areas: information and data competence, communication and cooperation competence, development and design competence, security competence, problem-solving competence, and analysis and reflection competence. In addition, four competence levels (Beginner, User, Advanced and Expert) are offered for self-assessment.

More information (in German): <https://ichdigital.cjd.de/online-testen>

5 Conclusions

Based on the results of the screening and the interviews with key informants, it can be said that although there are a large number of programmes, projects and initiatives in Germany to promote digital competences among citizens, the comprehensive national strategy covering all areas of society and including the EU DigComp strategy still need to be expanded or are still being developed.

It is becoming apparent that the topic of digitalisation with regard to PWLD needs to be raised further in people's minds and that policy makers and implementing institutions need to look at developing a standard for teaching digital skills to PWLD. The target group should be considered individually so that the framework conditions for digital transfer have the best possible prerequisites and are therefore promising.

The research shows that the EU DigComp strategy is largely unknown, which was confirmed by our feedback from key informants. The Federal Ministry of Digital Affairs and Transport is not aware of the strategy and refers the PWLD target group to the Federal Ministry of Labour and Social Affairs. Despite being forwarded to the relevant department, no feedback has been received.

Kalcher & Kreinbacher-Bekerle (2021) identified risks, including insufficiently trained staff and negative attitudes towards digitalisation in vocational training for people with disabilities. There are discrepancies between policy intentions and practical implementation, as well as challenges due to lack of standardisation, lack of resources and insufficient awareness of digital inclusion. The federal structure and legal barriers make it difficult to develop and implement accessible digital products and services.

It can therefore be said that many non-profit organisations and initiatives are committed to the digital inclusion of people with disabilities, but most of them only refer to the general "people with disabilities" instead of highlighting specific groups such as PWLD.

There is also no reference to the EU DigComp strategy in the Digital Strategy for Germany. This is also clearly evident in the responsible ministries. Although the Federal Ministry for Digital and Transport is the leading agency for the German digital strategy 'Digitalstrategie', it reported that it was not aware of the EU DigComp strategy.

With regard to the target group PWLD the Federal Ministry for Digital and Transport indicated that the Federal Ministry of Labour and Social Affairs was the appropriate contact given that the target group and the topic in question were located there. The topic was subsequently referred to the relevant department, but no feedback has been forthcoming to date.

The bottom-up initiatives represent the first important implementations of digitalisation for people with disabilities. DIDAB, a learning platform for people with disabilities that offers interactive

learning units with videos, pictures and quizzes; Code Up, a project that aims to teach digital skills and educate people in the safe use of computers, email and AI; Ausdrucksstark, a project that developed concepts for active media work with young people with and without disabilities. However, again there is no direct link to our PWLD target group.

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7 Annex

Key informants interviewed for this report

Name of the key informant	Organisation and/or area of expertise	Associated partner	Date	Duration	Setting
Anonymous Expert	Member of the parliament	no	14.05.2024	90	in person
Anonymous Expert	Umbrella organisation	no	17.05.2024	90	in person