Increase
Digital
Competences
to Promote Inclusion

InDiCo - Increase Digital Competences to Promote Inclusion

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Assessment and validation of digital competences at levels 1 and 2 for persons with learning difficulties

Country Report
Spain

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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 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 persons with learning difficulties have low digital competences themselves. Against this backdrop, the InDiCo project aims for a clearer understanding of the competences required by persons with learning difficulties 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 persons with learning difficulties 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 persons with learning difficulties 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.

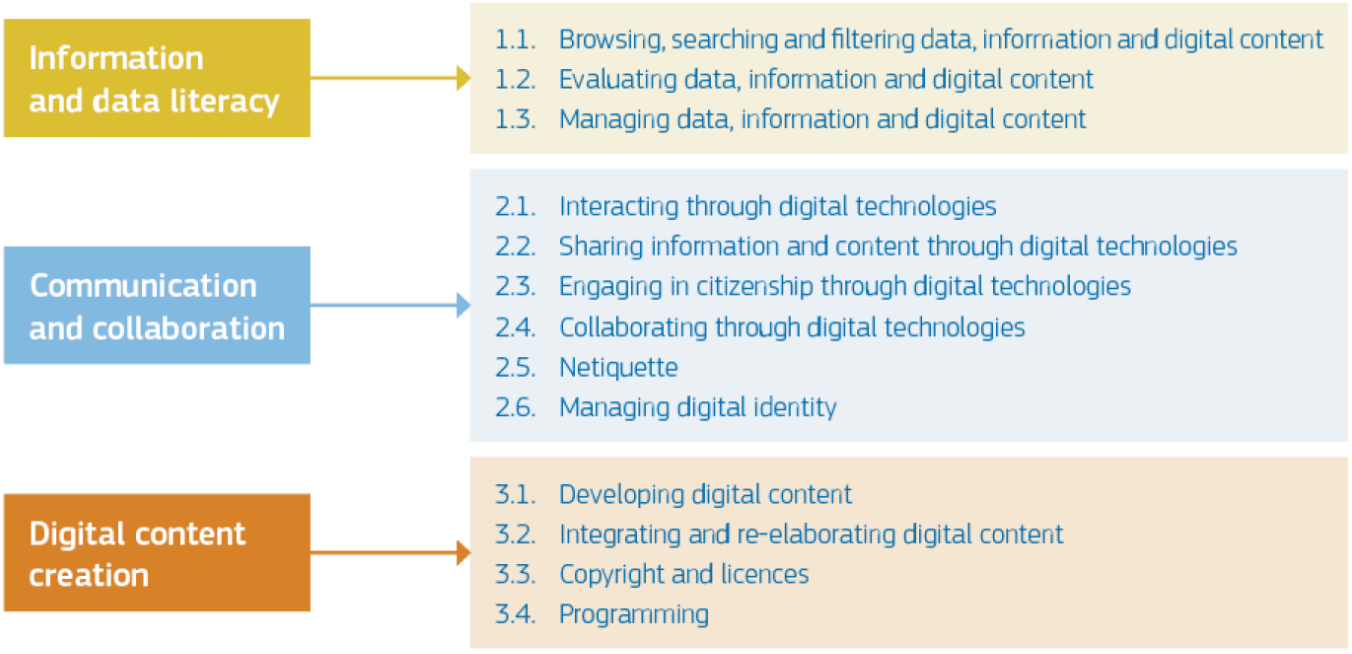
DigComp 2.2: The Digital Competence Framework for Citizens

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:	• **choose simple** digital tools and technologies for collaborative processes.
	2	At basic level and with autonomy and appropriate guidance where needed, I can:	• **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 persons with learning difficulties 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 persons with learning difficulties 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 persons with learning difficulties 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).

- What is the status quo of the assessment and validation of digital competences at levels 1 and 2 of the DigComp framework for persons with learning difficulties?

- What are the challenges and gaps regarding the assessment and validation of digital competences at levels 1 and 2 of the DigComp framework for persons with learning difficulties?

- To what extent are digital competences currently assessed and validated with persons with learning difficulties?

We conducted web searches for information on relevant bottom-up initiatives for persons with learning difficulties (project websites, evaluation reports and the like) based on relevant keywords, screened the content with regard to the promotion, assessment and validation of basic digital competences, and documented these materials (Prior, 2011, p. 95).

We identified key informants (Fetterman, 2008) as possible respondents with first-hand knowledge of the assessment and validation of basic digital competences for persons with learning difficulties and asked them to share their knowledge, experiences and thoughts on digital inclusion of persons with learning difficulties (or other vulnerable or marginalised groups). Data was collected via an online questionnaire using Google Forms and the survey data was processed anonymously.

As the data was collected mainly through narrative responses to open-ended questions, the online survey is considered a qualitative method (Julien, 2008a, p. 846).

- The first questions collected information about the respondents' professional background.
- The next questions collected information about their professional expertise: How they promote the digital competences of persons with learning difficulties (or other vulnerable or marginalised groups) to contribute to digital inclusion; what elements of their project, initiative or work are key to promoting the digital inclusion of persons with support needs; what challenges they have encountered in their project, initiative or work related to the assessment and/or validation of basic digital competences and how they have dealt with them; and finally, what further challenges do they see for the assessment and validation of basic digital skills for persons with learning difficulties (or other support needs).
- The following set of questions explored whether a standard or reference framework is being used to assess and/or validate basic digital competences in their project, initiative or work. And if so, which standard or reference framework is being used. This was followed by a question on whether they were familiar with DigComp, the European digital competence framework, and if so, what is the relevance of DigComp in their project, initiative or work. This was followed by a question on whether they use a national standard or reference framework for digital competences and if so, they were asked to provide the name of this national standard or reference framework and its relevance to their project, initiative or work.
- The last two questions explored respondents' expertise by asking what they thought was the potential of assessing and validating basic digital competences for persons with learning difficulties (or other support needs). And what they think could be helpful to further promote the assessment and validation of basic digital skills for people with learning difficulties (or other support needs).

In order to provide answers to the research questions, we analysed the responses using the qualitative method of content analysis (Julien, 2008b). The respondents' knowledge, experiences and thoughts are presented in this report to shed light on the status quo of the

assessment and validation processes of basic digital competences with regard to persons with learning difficulties.

2 Background of the respondents

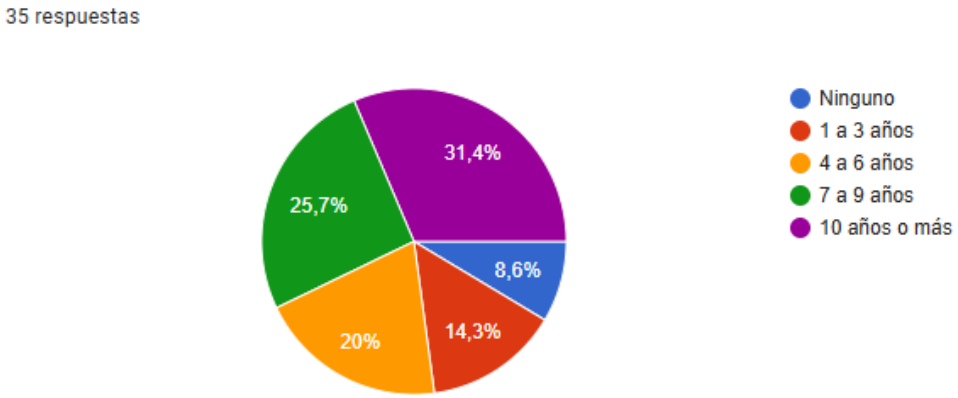
For the online survey we contacted one hundred key informants with first-hand knowledge of the training and/or assessment and validation of basic digital competences, and 35 key informants answered the questionnaire.

In this section, we present the respondents' professional experience and expertise.

Years of professional experience of the respondents in the field of education, training, qualification, skills development (adult education/non-formal learning)

31,4% of the respondents have ten years or more of professional experience in the field of education, training, qualification, skills development (adult education/non-formal learning).

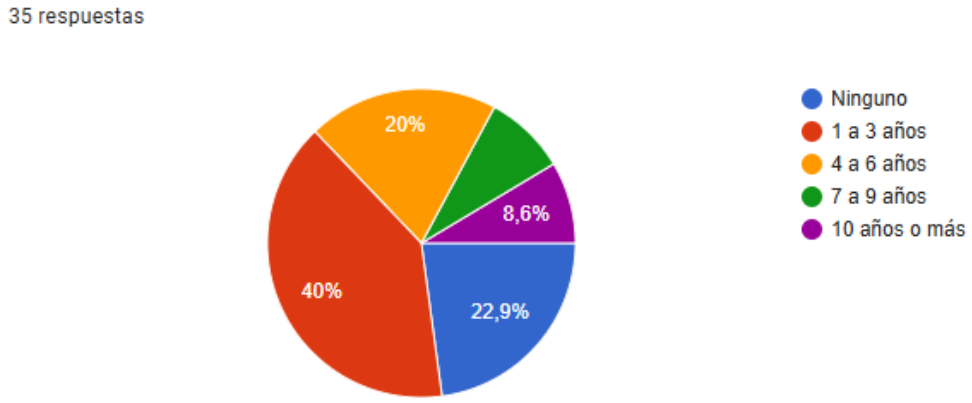
25,7% of the respondents have 7 to 9 years of experience in the field. 20% of the respondents have 4 to 6 years of experience, 14,3% of the professionals have to 1 to 3 years of experience in the field and finally 8,6% of the respondents have no experience in the field of education, training, qualification, skills development (adult education/non-formal learning).



Years of professional experience of the respondents in assessing and/or validating basic digital competences

40% of the respondents answered that they have between 1 to 3 years of experience in assessing and/or validating basic digital competences. 22,9% of the respondents have no experience in this field.

8,6% of the professionals have 10 years or more experience in the field and the same percentage is for those who have 7 to 9 years of experience. Later there is a 20% of respondents that have 4 to 6 years of experience.

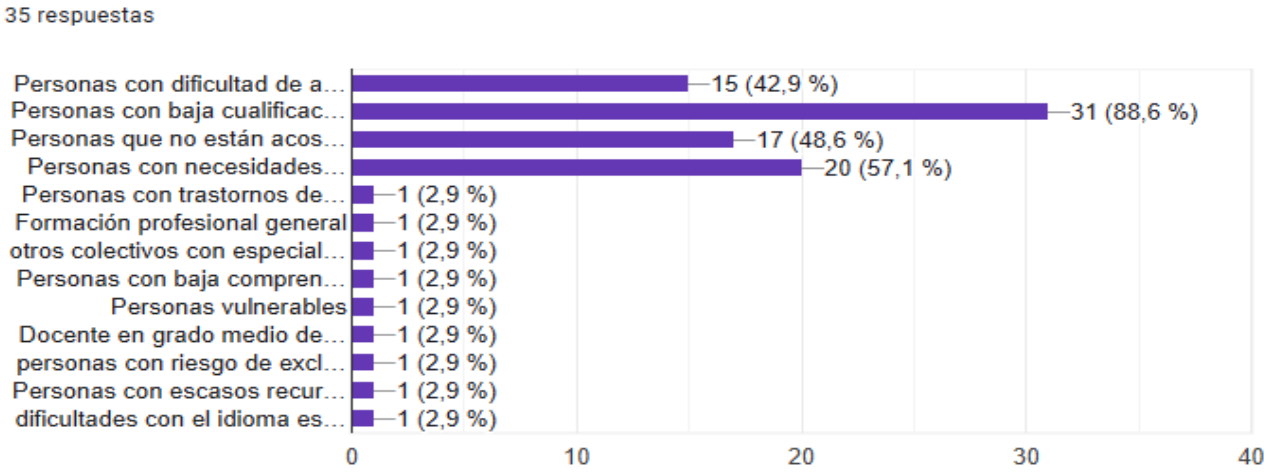


Target group(s) that the respondents mainly work with (multiple answers were possible)

42,9% of the respondents work with people with learning difficulties. And 88,6% of the professionals answered that they mainly worked with people with a low qualification.

Later there is 48,6% of the respondents that mainly work with people that are not used to learning and 57,1% of professionals working with persons with basic educational needs (low literacy, low numeracy...).

In this question there was an option to write other target groups, where we can highlight some of the answers such as: persons with severe mental health disorder, persons with poor comprehension and expression of the Spanish language and people with limited financial resources.



3 Status quo of the assessment and validation of digital competences at levels 1 and 2 with regard to persons with learning difficulties

This report is based on the results of an online survey and of a desk research to explore the promotion, assessment and validation of basic digital competences at levels 1 and 2 with regard to persons with learning difficulties. Before sending out the survey there has been a previous screening where information was gathered through documents, internet reviewing and interviewing key informants related to the field of digital competences and organisations or institutions that experience support and attend people with intellectual disabilities and learning difficulties.

Online self-assessment tools are one way of assessing and validating digital skills. However, in our view, these seem inappropriate for persons with learning difficulties due to their high threshold. Below are some examples of online tools where competencies are assessed:

- **Knowledge Engineering Institute:**
  https://www.iic.uam.es/soluciones/recursos-humanos/evaluacion-competencias-digitales/

A digital skills assessment tool aimed primarily at HR professionals, the site offers a series of assessments of various skills including digital skills, personality assessment, English assessment, competency profiling, critical thinking assessment, values assessment, etc.

In relation to the digital competences assessment questionnaire, three domains are explored: operation of technology, willingness to use technology and digital competence.

Subsequently, once the study has been carried out, the benefits that a good assessment brings to the company emerge, these are: assessing candidates individually, comparing profiles, observing the level of digital transformation, making candidates visible for internal promotion, and facilitating the identification of profiles that need development in digital competence. (Knowledge Engineering Institute, 2024).

- **Digital Agency of Andalusia, Regional Ministry of the Presidency, Interior, Social Dialogue and Administrative Simplification**
  https://www.juntadeandalucia.es/organismos/ada/areas/competencias-digitales/nivel-competencias.html

This is a platform to diagnose the level of digital competences. On entering the platform as a guest user, it summarises what the assessment consists of and what is derived from it.

It indicates that between 21 and 63 tests will be taken, in a time between 30 and 40 minutes, and that at the end, depending on the score obtained, a series of itineraries will be proposed to follow

Skills such as: information and information literacy, browsing, searching and filtering of data, management of data-information and digital content, interaction through digital technologies, dissemination through digital technologies, citizen participation through digital technologies, collaboration through digital technologies, internet behaviour, digital identity management, development of digital content, etc. will be assessed (Digital Agency of Andalusia, Regional Ministry of the Presidency, Interior, Social Dialogue and Administrative Simplification, n.d.).

- **Europass - Test your digital skills**
  https://europass.europa.eu/es/herramientas-de-europass/test-your-digital-skills

Online test with simple questions on different digital competences and with final report on competences to improve, then offers a learning path on those to improve (Europass, n.d.).

The status quo of the assessment and validation of basic digital competences with regard to persons with learning difficulties has to be considered against the background of the National Digital Skills Plan in Spain, which is part of the España Digital 2026 national strategy. This National Digital Skills Plan mentions the EU DigComp strategy, in what it consists and the existing levels of competences (Ministry of Economy, Gobierno de España, n.d.). However, the document does not make any special mention about persons with disabilities or with learning difficulties during the writing of the national plan. It also does not show an assessment or validation of common strategy that the institutions should provide to the general population. So, we can say that there is no formal or common way to validate digital competences of persons with learning difficulties.

Despite the existence of a National Digital Skills Plan and a Digital Strategy, the professionals interviewed and surveyed were unaware of these frameworks. The survey results indicated that 60% of respondents do not utilise any standard or framework to assess and/or validate basic digital competencies. The 40% of respondents who indicated that they do use a framework to assess and/or validate basic digital competencies did not provide the specific framework they employ, but they mentioned which practical methods they use to assess digital competences. Only one respondent indicated that they refer to the Digital Competences for Citizenship Framework of their city, but didn't specify it further.

In the survey we also asked the respondents if they use a national standard or reference framework for digital competences, and 91,4% of the respondents answered with 'no'. The three respondents (8,6 %) who stated that they use a national framework mentioned that the training programmes they provide are SEPE (public employment service Estatal) programmes that refer to the 'European Union's Framework for Digital Competences for Citizenship' (Marco de Competencias Digitales para la Ciudadanía de la Unión Europea). They listed the following competences that seemingly are content of this framework:

- Perform and integrate basic administrative support operations (UC0969_1)

- Transmit and receive operational information in routine transactions with external agents of the organisation (UC0970_1)
- Perform auxiliary operations of reproduction and filing in conventional or computer support or computer support (UC0971_1)
- Perform basic operations of data and text processing, and preparation of documentation (UC0974_1)

As we mentioned above, the EU DigComp is only briefly mentioned in the national strategy, there is no translated EU strategy document on the official pages of the Spanish state administration, or at least not within easy reach of citizens. This makes us wonder whether the institutions and bodies that have to impart digital competences do consider this strategy. With this research, we carried out interviews with professionals and none of them knew what the DigComp strategy was. In the survey we conducted, 88,6% of the answers to the question of whether they knew about this strategy were in negative. 11,4% of the respondents were aware of the DigComp, and they highlighted that the strategy gives an idea of the competence areas in which the user is autonomous in use and management and in which areas he/she is not, so that it makes it easier to go deeper and intervene in those areas that are more deficient.

When asked about the potential of assessing and validating basic digital competences for persons with learning difficulties (or persons with other support needs), the respondents answered based on their expertise and experience. The key findings are listed below:

- A manual for assessing or validating competences could improve teaching efficiency and knowledge transfer.
- Development of procedures for daily life and application on mobile devices is essential. Didactic means should be adapted both in content and in the digital format offered.
- A structured system to measure user progress has the potential to improve employment or social participation opportunities.
- A structured assessment would be valuable to identify individual needs more accurately. It would contribute to providing an objective assessment of digital skills with more specific information to recognize strengths and areas for improvement, which would encourage their professional development.
- Assessment and validation processes could foster resilience and motivation in using digital skills.

The survey revealed a common or standardised model to assess and validate competences would be necessary in order to have a common criteria and strategic lines to work on in each area to improve competence and acquire a higher level of digital skills, enabling everyone, and

especially persons with learning difficulties, to reach their personal goals and objectives. Technological advances are increasing and the population needs to be prepared for them, which is why an organisation is necessary. Moreover, if we are talking about persons with learning difficulties, such as people with intellectual disabilities, we have an even greater challenge. Therefore, the need to have a frame of reference to assess and validate competences is of great importance.

4 Challenges and gaps regarding the assessment and validation of digital competences at levels 1 and 2 with regard to persons with learning difficulties

As mentioned in the previous section, before conducting the survey that we are going to analyse in this report, documentary research was carried out, where we have detected several challenges with respect to the subject that concerns the project. Technology is advancing at a gigantic pace, which means that training is not keeping pace with the digital growth that is taking place worldwide, and therefore the digital divide for people with disabilities or learning difficulties is becoming even wider.

Another challenge is that most of the initiatives or programmes aimed at the target audience of this report in Spain tend to be third-sector, non-profit organisations, which therefore do not have the financial capacity to meet the costs of IT or technological materials in order to have the most up-to-date equipment possible. On the other hand, if we add that persons with learning difficulties also have a lack of economic resources, we can also find people who do not even have access to the internet in their mobile phones.

On the other hand, we see that one of the biggest challenges is that there is not a unique system or at least, professionals do not know how to evaluate and validate digital competences in a common and official framework.

Analysing the survey data that we have collected we can highlight most common challenges that our respondents gave us:

- There is a need for more training for professionals, to know how to transmit knowledge in digital competences to people who have learning difficulties or some kind of intellectual and/or mental disability.
- The difference of levels in the classroom/workshops. This is complicated to apply an unique survey or assessment tool to the whole group.
- In order to assess learners with intellectual disabilities, it is best to carry out practical assessments, but it is difficult to do this with all users in an organisation, due to lack of staff resources.
- The existence of several models or ways of assessing digital competences, not knowing which one to use to make a real assessment of competences and in which frame of reference it is being carried out.
- Resistance to change, unwillingness to be aware that you lack digital competences.

Further challenges detected through the respondents on the survey:

- Lack of knowledge of basic formalities via mobile phone or computer.
- Accessibility to digital tools. Websites are not designed (to a large extent) in a functional/visual/simple way... They often complicate even the process of requesting an

appointment. For example, people with neurological problems, intellectual disabilities or from a different culture or with a different level of schooling may not be able to answer the sections that are requested as validation and verification that it is not a robot making the request (for example, when asked to do a sum, indicate which word is not part of a specific group/collective...).

- The assessment of basic digital competences, such as computer literacy, sometimes involves subjective aspects that are difficult to measure objectively and implies a flexible approach to assessment that is adapted to the specific needs of each participant and context.

We also asked in the survey the opinion of the respondents about what they think that could support promoting the use of assessment and validation systems for basic digital skills for persons with learning difficulties. We have summarised the most relevant answers:

- More training for professionals and support guides
- More resources (funding) for teaching and support staff, as well as technical equipment
- Development of more free offers and increase of availability of u-to-date digital device
- Translation of tools into native languages
- A standardised assessment could lead to a greater autonomy for the person in carrying out daily tasks, improving communication, work input, etc.
- The focus should be on the learning activity and not on a labelling and/or classification activity. Assessment tools should be developed from a learning perspective and not from a teaching perspective.
- Customised learning media both in terms of content and the digital format offered
- Use of different formats, that these are sensitive to individual needs
- Having a support person or persons to help persons with learning difficulties carry out the tasks in the event that they do not feel capable.
- Understanding the complexity of each of the situations and personal characteristics in order to offer comprehensive support focused on the specific needs. As well as facilitating the completion of procedures in order to simplify and increase accessibility to comprehensive information and offers to eliminate barriers
- Programmes with longer duration and intensity. Many digital skills programmes are of short duration and do not provide the knowledge and practice required for digital skills
- Raise awareness of the importance of basic digital skills and the assessment and validation of these skills

5 Extent of the assessment and validation of digital competences at levels 1 and 2 with regard to persons with learning difficulties

Based on the desk research carried out before the survey was sent out, we found several initiatives which basically try to give training answers to persons with learning difficulties in terms of digital competences. Most of these initiatives were from the private sector, specifically non-profit organisations, such as social providers. Some of the entities have specific people who have studied special education or have a master's degree or their own studies related to the support of persons with learning difficulties. Others do not have this profile working because it is not a very abundant profile in the labour market either, so they attend the users from their own knowledge and what they learn in their day to day work.

When we asked respondents whether a standard or reference framework is used to assess and/or validate digital skills (in their project, initiative or work), they mentioned some practical methods they use to assess digital competences, such as:

- Level tests
- Students must submit the internship dossier via a digital platform in a specific format such as canva, pdf or powerpoint.
- An interview or a simple questionnaire is used to determine the participants' knowledge. If this is not possible, options are suggested for them to demonstrate their basic knowledge, e.g. using the mobile phone calendar or "copy and paste".
- Framework of digital competences for citizenship (as already mentioned in detail in chapter 3)
- Constructivism, Zone of Proximal Development, Emotional Intelligence.
- Objectives and items from public calls for digital competences applied to the job search.
- satisfaction questionnaires and rubrics

In the following we show some respondents' answers on how they promote the digital competences of persons with learning difficulties (or other vulnerable or marginalised groups) to contribute to digital inclusion:

- Through free basic workshops adapted to the digital competences and specific needs of persons with learning difficulties: from how to use a computer and mobile device, to how to create an email account, make a medical appointment online or look for a job through digital platforms
- Through specific training actions, practice and longer programmes, by applying transversal training throughout the programme
- By highlighting the benefits of digital inclusion (e.g., autonomy and empowerment) and by encouraging them to access new, easily accessible and free applications that are targeted at the skills or objectives they wish to acquire. Free access to technical equipment is also emphasised.

- Work on learning individually with personalised attention or in small groups
- Through individual sessions raising awareness of the need for digital literacy and workshops on basic digital skills and the use of online procedures with the administration or in everyday life
- Through playful and constructivist strategies, such as gamification.

We have also gathered information through the survey about key elements to promote the digital inclusion of persons with support needs:

- It is necessary to have basic resources for the training sessions and also to have a guide as a support, for professionals and learners.
- The instructions must be made in a simple, dynamic and easy way so our target group can understand everything correctly.
- To make users understand how important digital skills are for labour opportunities and social/personal proceedings and formalities. It is necessary to make them understand that it is essential to have competence in this sense.
- Accessibility in all the technologies adapted to all forms of disabilities.
- More human resources to support programmes and initiatives dedicated to digital competences with people with intellectual and learning disabilities.
- Adapt learning duration to each individual, not everyone has the same learning rhythms.
- A common methodology to evaluate and validate digital competence in the same way so it can be a value at curricular level.

6 Conclusions

After conducting our research, we observed that both the European DigComp strategy and the national strategy regarding digital competencies are not well known. Consequently, this leads to the absence of a common methodology for assessing and validating citizens' competencies. As a result, there is also a lack of a specific strategy for individuals with intellectual disabilities or learning difficulties.

Upon analysing the survey responses, we highlight the following conclusions:

- The educational sphere should consider variables beyond classroom learning, such as the resources available to students in their personal lives and the support they receive in their environment. The creation of a brief standard survey to determine students' initial level is suggested. Furthermore, there is a proposal to increase resources, including funding, for teaching staff, support personnel, and technical equipment.
- It is recommended to implement policies that promote digital inclusion at all educational levels. This includes training programs for educators and counsellors, the development of accessible and tailored assessment tools, as well as collaboration with specialised institutions and relevant entities.
- Real accessibility to all technological tools and applications, removing barriers for individuals with different needs or disabilities.

In Spain, it is necessary to emphasise the European DigComp strategy. It would be essential for this document to be easy to access and well-known among all professionals in the public sector, enabling its dissemination among private entities in the third sector. According to our research, this sector has developed the most initiatives regarding programs and training in digital competencies for people with disabilities. Therefore, they should have quality tools to improve the social inclusion of this population.

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