

Digital Readiness

of Vocational Educational

Institutions

in an Inclusive Environment

PR2: Handbook

Chapter 2

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Abbreviations

* AT: Assistive Technology
* CV: Curriculum Vitae
* ETCF: ENTELIS+ Trainers Competence Framework
* EU: European Union
* ICT: Information and Communication Technology
* NGO: Non-Governmental Organization
* VET: Vocational Education and Training

# Indicators as self-reflective tool to assess practice

## Introduction

Chapter 2 of the DIG-i-READY Handbook suggests a set of indicators for good, sustainable, accessible, well-balanced and inclusive digital education, which takes place in a school/home environment and includes ethical aspects of digital learning. These indicators are meant to be used as a self-reflection tool to assess one’s own practice.

The development of these indicators was firstly based on the practices, methodologies and tools collected in the [Good Practice Catalogue](https://digi-ready.eu/good-practice-catalog) of the project, where promising practices were mapped and analysed. These practices identified: education levels and settings, type of practice, target groups and stakeholders involved, needs that urged the implementation of practices, accessibility and inclusive education requirements they fulfilled, and strengths and weaknesses.

These practices, methodologies and tools pertained to the field of digital education in Europe and most of the times specifically addressed learners with disabilities, especially in the Vocational Education and Training sector. Some of these practices were projects and studies each partner had conducted on the topic in the past. Others were focused on experiences during the COVID-19 pandemic in the 27 countries of European Union.

For the collection of the Good Practice Catalogue, we approached the notion of good practice using indicators that took into account the level of digital readiness of the learners with disabilities and educators; the feedback provided by the target group as reported by the stakeholders themselves; possible differences between countries or settings; barriers for utilizing available tools and methodologies; conditions met for the successful integration of digital technology, tools and methodology into the learning/teaching process (skills, infrastructure, accessibility, etc.) including target groups, elements of innovation, expected impact and transferability potential.

The practices collected and their characteristics provided a framework for the development of key success factors for promoting digital inclusive education and inclusive digital readiness. These key success factors are translated into indicators to be used as a self-reflection tool for assessment of one’s practice and are presented in this chapter.

Overall, the indicators analysed in this chapter have been developed based on the outcomes of the analysis of existing good practices and the relevant lessons learnt, the analysis of partners’ experiences, and other existing frameworks for inclusive education, digital competences and sustainable digital education developed in other European funded projects.

The indicators of Chapter 2 are expected to:

* Serve as a self-reflection tool for self-evaluation for settings and agencies involved in Vocational Education and Training for learners with disabilities.
* Facilitate the development of individual practical guidelines for “going digital” addressed to the Vocational Education and Training community (school leaders, educators, learners with disabilities, parents), while respecting the digital infrastructure in a Vocational Education and Training centre/school and home environment, as well as the social/digital skills of learners with and without disabilities and their educators.
* Be available for immediate use to face the COVID-19 emergency or another "emergency situation" (earthquakes, floods, another epidemical crisis, etc.).

In the following sections, the DIG-i-READY indicators are presented. These are organized in areas which belong to five broader elements identified as important in the DIG-i-READY Project for the development of inclusive digital education practices. Where relevant, additional indicator frameworks and suggestions for further reading have been provided with respective links.

The five elements of indicators are:

1. **Good**: Practices that are expected to yield good results towards specific aims and are in alignment with DIG-i-READY goals and values such as respect for the Convention of the Rights of People with Disabilities (UNCRPD).
2. **Sustainable:** Practices that are sustainable take into consideration financial, environmental, and societal impact, and allow for use in transition periods.
3. **Accessible:** Practices that refer to key issues, standards, values, and components which are taken into consideration so that learning processes and opportunities are available and accessible to a range of learners.
4. **Inclusive:** Practices that refer to key issues, standards, values, and components which are taken into consideration in order to build supportive communities and foster high achievement for all educators, learners with disabilities, family members, and caretakers involved in learning and teaching activities.
5. **Addressing ethical issues**: Practices that refer to key issues and values which need to be taken into consideration in order to build digital learning environments and communities that respect human rights, privacy, personal data protection, and are age appropriate, gender and culturally inclusive.

As mentioned above, for each element of the above, areas of assessment are identified under each of which corresponding indicators are specified. Areas are defined as the main domains of design and development of educational practices and learning processes to be implemented in Vocational and Educational Training, in order to design and develop digital inclusive education. DIG-i-READY indicators in each area are defined as key issues that may constitute qualitative criteria. In certain cases, these indicators may refer to an existing set of indicators, either quantitative or qualitative, or sets of standards and measures. In general, indicators have been designed in the form of descriptors for good, sustainable, accessible and inclusive good practices as mentioned above.

Figure 2.1 (see Annex A) depicts the relation between elements, areas and indicators.

The indicators can be used as a checklist for things to consider while developing practices or as a self-evaluation tool for self-reflection on existing practices. Levels of achievement may include (1) not really started, (2) somehow there, and (3) fully in place (see Annex B, Table 2.2).

At this point, it needs to be noted that any implemented or planned practice needs to be aligned to the UNCRPD alignment. To do so, sets of key issues, standards, policies and values were taken into consideration so that learning processes and opportunities successfully contribute to the implementation of the [UNCRPD provisions that are related to DIG-i-READY scope](https://www.ohchr.org/en/disabilities/sdg-crpd-resource-package). Special attention was given to the following articles and their attributes/indicators for implementation:

* Article 5 - [Equality and non-discrimination](https://www.ohchr.org/sites/default/files/article-5-indicators-en.pdf)
* Article 8 - [Awareness-raising](https://www.ohchr.org/sites/default/files/article-8-indicators-en.pdf)
* Article 9 - [Accessibility](https://www.ohchr.org/sites/default/files/article-9-indicators-en.pdf)
* Article 19 - [Living independently and being included in the community](https://www.ohchr.org/sites/default/files/article-19-indicators-en.pdf)
* Article 21 - [Freedom of expression and opinion, and access to information](https://www.ohchr.org/sites/default/files/article-21-indicators-en.pdf)
* Article 27 - [Work and employment](https://www.ohchr.org/sites/default/files/article-27-indicators-en.pdf)
* Article 29 - [Participation in political and public life](https://www.ohchr.org/sites/default/files/article-29-indicators-en.pdf)

The description of indicators categorised across the five elements explained above and their areas follows below.

## Elements of indicators

###  Good Practice indicators

Indicators under the *Good* *Practice* element characterize practices expected to yield good results towards specific aims and are in alignment with DIG-i-READY goals and values such as respect for the Convention of the Rights of People with Disabilities (UNCRPD). They cover a total of five (5) areas as follows:

**Area A1, Positive impact:** There are provisions and enhancements for access to high-quality community-based services for learners with disabilities (see [Social Impact Metrics](https://www.sopact.com/social-impact-metrics)).

* Indicator A1.1. Number of learners with disabilities having their needs met increases.
* Indicator A1.2. Procedures and data collection methods exist for the recording of change over time as a result of the implementation of practices.
* Indicator A1.3. Results of practices can be measured quantitatively or recorded in stories, images and testimonials.
* Indicator A1.4. Change recorded is systemic.

**Area A2, Co-production:** Learners with disabilities, their families and professionals plan together the (integrated) services and support that the learners and their peers need, from the start, allowing people self-assess their needs and the types of support they imagine, so as to achieve agreed outcomes (see [Co-production – how disabled people can (not) break the mould in service/workforce development and commissioning](https://www.bristol.ac.uk/media-library/sites/sps/documents/UDC%20co-production%20position%20paper%20FINAL.pdf)).

* Indicator A2.1.People are recognized as assets and the perception of them is transformed from passive service recipients and burdens on the system into equal partners in designing and delivering services.
* Indicator A2.2.The delivery model is altered and built on people’s existing capabilities, altering services from a deficit approach to one that provides opportunities to recognize and grow these capabilities, and actively supports them to put these to use with individuals and communities.
* Indicator A2.3. Learners, staff and parents/carers are offered a range of incentives to engage, in order to enable them to work in reciprocal relationships with each other, having mutual responsibilities and expectations.
* Indicator A2.4.Peer support networks are engaged alongside professionals as the best way of transferring knowledge and facilitating change.
* Indicator A2.5.Distinctions between professionals and learners-carers are blurred, by reconfiguring the way services and learning are developed and delivered.
* Indicator A2.6.Service centers become catalysts and facilitators of change rather than central providers of services themselves.

**Area A3, Innovation:** The practice successfully demonstrates why it is innovative in its local/regional/national context (see [Innovation Orientation in the Non-profit Sector: Analysis of Its Impact on the Performance of Spanish Non-governmental Development Organizations](https://www.frontiersin.org/articles/10.3389/fpsyg.2021.797621/full)).

* Indicator A3.1.Objectives are being fulfilled.
* Indicator A3.2.The organization has presence in the media, besides its own social media.
* Indicator A3.3.The organization undertakes new projects.
* Indicator A3.4.Private fund-raising is guaranteed as a result of the practice.

**Area A4, Competences aimed:** A variety of different competences are aimed through the programmes of the organization.

* Indicator A4.1. Meeting accessibility needs is pursued.
* Indicator A4.2. Enhancement of digital skills is pursued.
* Indicator A4.3. Enhancement of social skills is pursued.

**Area A5, Level of implementation:** The Programmes are implemented across different levels.

* Indicator A5.1. Programmes are implemented on an administrative level.
* Indicator A5.2. Programmes are implemented on a methodological level.
* Indicator A5.3. Programmes are implemented on a learner’s level.
* Indicator A5.4. Programmes are implemented on a social level.

**Additional indicator frameworks and suggestions:**

* Check the DIG-i-READY Competence Framework for learners’ competence development.
* [ENTELIS+ Trainers Competence Framework](https://entelisplus.entelis.net/wp-content/uploads/2022/01/D3.17-ENTELIS-Competency-framework.pdf)

###  Sustainability indicators

Indicators under the *Sustainability* element take into consideration financial (i.e., be financially feasible), environmental (i.e., ecologically friendly) and societal impact (i.e., contributing to commonly shared values and relationships). In this Handbook, indicators of this element refer to the following three areas:

**Area B1, Institutional change towards digital transformation**: The rules, processes and values that govern relationships between members of an organization, between organizations, or between an organization and the public (see [Revisiting institutional stability: A systematic review and distillations of dominant modes](https://onlinelibrary.wiley.com/doi/abs/10.1002/eet.1941)).

* Indicator B1.1.Disruption, uncertainty and new arrangements are conceivable.
* Indicator B1.2.The cost of taking risks is considered surmountable.
* Indicator B1.3.Factors causing external pressure are recognized and managed.
* Indicator B1.4. Recognition of values, roles and preferences of individual actors in defense of cultural norms that possibly cause conflicts.
* Indicator B1.5.Affirmative efforts undertaken by agents to preserve existing constructs and capacities or create new ones are recognized and managed.
* Indicator B1.6.Leadership facilitates the necessary investment.
* Indicator B1.7. Incorporation of new information is possible.
* Indicator B1.8. Openness and receptiveness to new ideas are present.
* Indicator B1.9. Accountability and monitoring are present in relationships and interactions.
* Indicator B1.10. Curriculum, instruction, and assessment practices are aligned with learning outcomes.
* Indicator B1.11. Authentic engagement is the essence of learning processes.
* Indicator B1.12. Environmental consequences are considered.

**Area B2, Maintenance of platform and tools:** Maintenance of the digital environment that allows the creation and exchange of learning content and resources, and also the use of services, based on interaction between requesting and receiving (see [Sustainability in the Age of Platforms](https://www.ceps.eu/wp-content/uploads/2019/06/Sustainability-in-the-Age-of-Platforms-1.pdf)).

* Indicator B2.1.Platform and tools are financially supported in the long term, and not only during the implementation of a specific project that introduced them.
* Indicator B2.2. Number of visitors and users increases.
* Indicator B2.3. Solutions are energy-efficient and environmentally friendly.

**Area B3: Network and establishment of collaborations/continued community participation:** Establishment of collaborations between various stakeholders and teams, which will build coherence, continuity and ethical commitment, informed by the broader ecosystem.

* Indicator B3.1. Use in transition periods.
* Indicator B3.2. Internal relationships between different entities and aggregation levels (e.g., countries, individuals, regions, enterprises) are in place.
* Indicator B3.3. Influence of entity attributes. These include mortality, regional differences, income, etc. Attribute analysis focuses on the relation or flow among entities and computes measures which evaluate the density or cohesion of the network, the reciprocity between network entities or the centrality of the egos (nodes) inside the network.

###  Accessibility indicators

Indicators under the *Accessibility* element refer to key issues, standards (i.e., accessibility standards), values, and components of accessibility requirements, which need to be taken into consideration so that learning processes and opportunities are available and accessible to a range of learners. This also involves the implementation of accessibility requirements for persons with disabilities in the design of the learning environment, tools, content, materials and learning approaches.

**Area C1, Availability:** Resources and information are easy to find and be reached by all interested parties, including where and how information is published.

* Indicator C1.1. Learning opportunities are disseminated to all possible interested persons within the organization.
* Indicator C1.2. Registration process to available courses and learning opportunities is easy.
* Indicator C1.3. Resources are available both in digital and physical forms providing different options to obtain.

**Area C2, Usability:** Resources and tools are easy to use, and users can easily interact with them to achieve their goals.

* Indicator C2.1. Learners understand how they experience digital learning materials and tools.
* Indicator C2.2. Learners are happy with the use of the digital learning materials and tools.
* Indicator C2.3. Learners can reach their goal with the use of particular digital learning material and tools.
* Indicator C2.4. Specific usability testing is performed successfully in terms of meeting particular usability testing standards.

**Area C3, Digital/e-accessibility**: Resources comply with accessibility guidelines and standards.

* Indicator C3.1. Web resources and content are developed by taking into consideration the [Web Content Accessibility Guidelines](https://www.w3.org/TR/WCAG22/).
* Indicator C3.2.Accessibility features are activated/implemented according to individual preferences while using mainstream digital technology.
* Indicator C3.3.Accessibility requirements are implemented for physical access and interaction with technology.
* Indicator C3.4.Accessibility requirements are implemented for cognitive access and communication with and through technology (e.g., digital content accessibility, easy-to-read).

**Area C4, Universal Design and Universal Design for Learning:** Learning environment and services comply with Principles of Universal Design and Universal Design for Learning

* Indicator C4.1. The learning environment is designed based on the principles of Universal Design.
* Indicator C4.2. The learning content and materials are designed and presented in ways that ensure that key information is equally perceptible to all learners (see [UDL principle and guidelines: options for perception](https://udlguidelines.cast.org/representation)).
* Indicator C4.3. Learners are provided with a variety of options to navigate and express themselves in the learning process and environment (see [UDL principle and guidelines: options for action and expression](https://udlguidelines.cast.org/action-expression)).
* Indicator C4.4. The learning process, content and materials provide multiple options for engagement, to attract interest, be relevant and sustain the effort of a diverse group of learners (see [UDL principle and guidelines: options for engagement](https://udlguidelines.cast.org/engagement)).

**Additional indicators frameworks and suggestions for further reading:**

* Usability testing frameworks (e.g., [10 Usability Heuristics for User Interface Design](file:///C%3A%5CUsers%5C35799%5CDownloads%5C10%20Usability%20Heuristics%20for%20User%20Interface%20Design))
* Universal Design Principles (see [Universal Design 7 Principles](https://universaldesign.ie/what-is-universal-design/the-7-principles/))
* [UDL guidelines and check points](https://udlguidelines.cast.org/)
* [Web Content Accessibility Guidelines](https://www.w3.org/TR/WCAG22/)
* [Making Content Usable for People with Cognitive and Learning Disabilities](https://www.w3.org/TR/coga-usable/)
* [Easy-to-Read Guidelines (Inclusion Europe)](https://www.inclusion-europe.eu/easy-to-read-standards-guidelines/)

###  Inclusive indicators

Indicators under the element of *Inclusive* refer to key issues, standards, values and components that need to be considered in order to build supportive communities and foster high achievement for all staff, students, family members and caretakers involved in learning and educational activities. Thus, the three (3) areas of indicators cover awareness and attitudes, educational policies and strategies at a micro-level and educational practices, deriving from the Entelis self-assessment tool for schools, which focuses more on digital competences and digital inclusive education as well as the Index for Inclusion which has been the basis for many inclusive education frameworks (see [Index for Inclusion](http://www.csie.org.uk/resources/inclusion-index-explained.shtml) and [Food and Agriculture Organisation of the United Nations - Good Practices Template](https://www.fao.org/publications/card/en/c/54bceab2-3250-51b3-96c3-01980c3b6a0a/)).

**Area D1, Creating inclusive digital cultures:** The whole VET educational setting (institution) is committed to the values of inclusive education and equality values for all learners and staff.

* Indicator D1.1. The mission and vision statements of the VET setting to establish inclusive values.
* Indicator D1.2. Language used in all communication of the VET setting is inclusive and stereotype-free in all aspects.
* Indicator D1.3 The management and whole VET setting planning respects diversity and is committed to the development of the competences and full potential of each individual learner.
* Indicator D1.4. Teamwork, collaboration and co-design are included as core strategies in the administration and the entire VET setting planning.
* Indicator D1.5. Accessibility of VET setting procedures is pro-actively maintained and audited.
* Indicator D1.6. Responses and strategies for addressing planned or unexpected changes respect and consider diverse learners and other stakeholders and avoid discriminatory practices.

**Area D2, Producing inclusive policies in digital environments:** Education for all with the use of technology is reflected in the official and unofficial policies.

* Indicator D2.1. New staff introductory sessions include aspects for digital inclusion and accessibility.
* Indicator D2.2. Administration documents and procedures are inclusive in terms of language and processes.
* Indicator D2.3. Staff development activities help staff to respond to learner diversity.
* Indicator D2.4. Emergency action plans include accessibility and disability-relevant measures.
* Indicator D2.5. There is a policy and code of practice for addressing discrimination and bullying.
* Indicator D2.6. An accessibility and reasonable adaptations monitoring mechanism/strategy is in place.
* Indicator D2.7. Resources are distributed fairly so that they support inclusion.

**Area D3, Evolving inclusive digital practices:** Inclusive strategies and methodologies are implemented in the teaching and learning practice.

* Indicator D3.1. Curriculum planning involves options for differentiation and personalisation of curricular content, processes, tools and outcomes.
* Indicator D3.2. Access, learning and communication barriers are identified and assessed, and digital technology solutions are recognised as a means for removing barriers.
* Indicator D3.3. Opportunities for participation in the learning process with the use of digital technology are created for all learners and monitored and evaluated under individual and curriculum objectives.
* Indicator D3.4. Educators/staff focus on creating learning experiences that are positive, success-oriented, and foster learning through authentic learning activities in digital environments.
* Indicator D3.5. Learners requiring personal (assistive technology) equipment to participate in the learning activities are encouraged to make use of it.
* Indicator D3.6. Educational environment (physical and digital) organization is such that digital technologies/tools are easy and accessible to use.
* Indicator D3.7. Teaching and learning resources developed are inclusive and accessible with the use of digital technology.

**Additional indicators frameworks and suggestions for further reading:**

* [Entelis self-assessment tool for schools: Short and Extended version](https://www.entelis.net/wp-content/uploads/2020/12/entelis_self_assessment_framework_for_schools_version_1.0_-_2016.pdf)
* [Index for Inclusion](http://www.csie.org.uk/resources/inclusion-index-explained.shtml)

###  Indicators pertaining to ethical aspects of digital learning

Indicators under the *Ethics* element refer to key issues and values that need to be taken into consideration to build digital learning environments and communities that respect human rights, privacy, personal data protection, and they are age appropriate, gender and culturally inclusive. Thus, indicators in this section aim to help settings to reflect on how their policies and practices ensure privacy and security, fairness, integrity, transparency, accountability, and counter biases across five (5) areas.

**Area E1, Privacy and security in digital environments:** undertaking measures to safeguard people’s privacy and their rights as data subjects.

* Indicator E1.1. Use and management of users’ personal data in ways which are ethical and compatible with the respective legal framework.
* Indicator E1.2. Respect users’ right to privacy and handle users’ personal data in ways which do not adversely impact their lives or infringe upon their right to privacy.
* Indicator E1.3. Use and manage users’ personal data based on users’ consent in relation to the purpose (why personal data was collected and how it will be used) and processing (how and where personal data will be stored, how long they will be retained for, and when and how they will be destructed).

**Area E2, Counter bias:** awareness of social bias in digital environments and efforts to counter them.

* Indicator E2.1. Awareness of the existence of social bias in digital material and communication (in terms of e.g., gender, ethnicity, ability, sexual orientation, culture).
* Indicator E2.2. Responsibility in combating social bias and refraining from an uncritical replication and circulation of biased material online is assumed.
* Indicator E2.3. Avoidance of discrimination reflected in online content or participation.

**Area E3, Fairness and equal opportunities in using digital technology:** undertaking all reasonable means to safeguard equal opportunity for participation in digital environments.

* Indicator E3.1. Create accessible versions of digital material to ensure the provision of equal opportunities for participation in digital environments.
* Indicator E3.2. Take into account obstacles to equal participation created by the digital divide and provide ways to circumvent them.

**Area E4, Accuracy, integrity and transparency in digital environments:** the ability to trace and verify the source of information as an important tool of e-democracy.

* Indicator E4.1.Refrain from uploading and/or sharing fake or inaccurate information online. Provide easy and full access to information and its source.
* Indicator E4.2.Acknowledge and respect intellectual property in terms of authorship, ownership, and copyright restrictions of online material.

**Area E5, Netiquette and accountability:** establishing and adhering by commonly accepted rules of social engagement in digital environments that promote respect.

* Indicator E5.1. Treat other users on the internet and social media with respect.
* Indicator E5.2.Refrain from using derogatory language and/or language that ignites hate and prejudice.
* Indicator E5.3 Assume responsibility for digital content one creates, uploads, endorses, and circulates online.
* Indicator E5.4 Share knowledge with other web users.
* Indicator E5.5 No spamming on the internet and social media.

**Additional indicators frameworks and suggestions for further reading:**

* [10 netiquette rules to maintain a good online reputation](https://us.norton.com/blog/kids-safety/what-is-netiquette) by Norton.

## Conclusions

Employing a self-reflection tool to assess one’s own practice is essential for the development of Vocational Education and Training settings and agencies for learners with disabilities. The indicators of this chapter serve exactly this purpose. The indicators speak to different areas which correspond to five elements that characterize educational practices: good, sustainable, accessible, inclusive, addressing ethical issues. The indicators’ detailed structure and wide overage of aspects and dimensions allows VET educational settings to “go digital,” transitioning to and from emergency situations that may occur, or to self-assess the digital inclusiveness and readiness of their existing practices.

**Annex I**

**Figure 2.1 Relations between elements, areas and indicators**



The name of each indicator is alphanumeric (e.g., *B2.2.*) The first character is a letter (A to E, in this case *B*) and indicates one of five broader elements that characterize educational practices (good, sustainable, accessible, inclusive, addressing ethical issues – in this case *sustainable*). The second character is a number and indicates an area of the element (each element can have a different number of areas, in this case, it is the *second* (2) area). The third character is also a number (after a period) and indicates an indicator of the area (each area can have a different number of indicators, in this case, it is the *second* (2) indicator of the area).

**Annex II**

**Table 2.2 Use of Chapter 2 indicators as a self-assessment tool**

|  |  |  |  |
| --- | --- | --- | --- |
| **ELEMENT (A, B, C, D, E)** |  |  |  |
| **Area (A1, A2, etc.)** | Not really started | Somehow there | Fully in place |
| **Indicator (under each area)** |  |  |  |
| **Indicator (under each area)** |  |  |  |
| **Indicator (under each area)** |  |  |  |

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