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Inclusion and Open Educational Resources



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The project EQui-T – a journey towards open inclusive educational resources for teachers

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1.1 Introduction

Teachers are the foundation of an inclusive education system, trying to meet the needs of a very diverse population of students in their everyday teaching, e.g. students from different socioeconomic backgrounds, cultural and linguistic diversity or participation because of different disabilities. To achieve this, appropriate teaching materials, e.g. books, videos or worksheets, are essential. Those materials are either created by the teachers themselves, based on their own expertise, or retrieved and shared via online-platforms. However, teachers are facing different obstacles when using these platforms. Insecurities regarding the copyrights when it comes to the terms of use, the adaption for certain students and the possibility of sharing, as well as the wide variation of the quality of these teaching materials.

Many high-quality, evidence-based teaching materials are created either from teachers or within national and international projects (e.g., Erasmus+ projects on a European level, and numerous projects on national levels). They often remain almost invisible on the individual project websites, get lost due to technical changes or the sheer quantity of materials of and on platforms. But also, teachers are very reluctant to share their own materials since they often do not know how or where to share them. To sum it up, there is a lack of an international system on the one hand, on how to distinguish between high-quality and low-quality teaching materials. And on the other hand, on how to disseminate them in a secure and legal way. Teachers need digital competence, didactic competence for differentiation and individualization to use those materials in classrooms.

1.2 A solution: the EQui-T project

To fill this gap, the Erasmus+ Teacher Academy project “European Quality Development System for Inclusive Education and Teacher Training - EQui-T”, was designed and successfully carried out between June 2023 and June 2026. The EQui-T project aimed to equip teachers with the knowledge and skills needed to find, create and share high-quality teaching materials that can be used and adapted freely by other teachers. Materials with these characteristics (free, adaptable and shareable) are known as Open Educational Resources (OER).

Thanks to their potential to be adapted flexibly to meet a wide range of students' needs and learning preferences, OER can be a valuable tool for inclusive education. Therefore, the project EQui-T ultimately aims to foster an always more inclusive educational context in whole Europe by enabling pre- and in-service teachers to identify, develop and share high-quality OER for inclusive teaching and learning, namely Open Inclusive Educational Resources (OIER).



1.3 What were the objectives of the EQui-T Project?

The project's main activities that the EQui-T consortium worked on were:

- developing a comprehensive, multi-perspective criteria catalogue for assessing the quality of OIER for inclusive teaching,
- developing a curriculum and established training courses for pre- and in-service teachers to develop and test innovative teaching materials in the form of OIER for technology-enhanced inclusive teaching,
- identifying good practices for disseminating OIER and providing guidelines for sustainable dissemination processes,
- establishing a sustainable network of teachers and other actors in the field of inclusive education on a national and international level to promote transnational collaboration and exchange of good practices on OIER and digital tools, among others,
- conducting mobility activities during the training courses and within the network.



1.4 Who are the participants and what is their responsibility?

To achieve the project aims, seven project partners from five countries working at Universities and University colleges of Teacher Education, as well as four associate partners joint forces coordinated by the University of Graz. The collaboration within this multi-professional team, drawing on the diverse expertise of the individual partners, enabled various perspectives on the topic of OIER to be explored and addressed.



Project Consortium



- University Graz
- University of Granada
- University of Padova
- Tallinn University
- University of South-Eastern Norway
- University College of Teacher Education Styria
- Private University College of Teacher Education Augustinum

Associated Partners

- Board of Education of Styria
- Graz University of Technology
- Research Center for Inclusive Education (RCIE)
- Wohlhart Lernsoftware



The project comprises seven work packages, each lead by a different partner (see Figure 1.1).

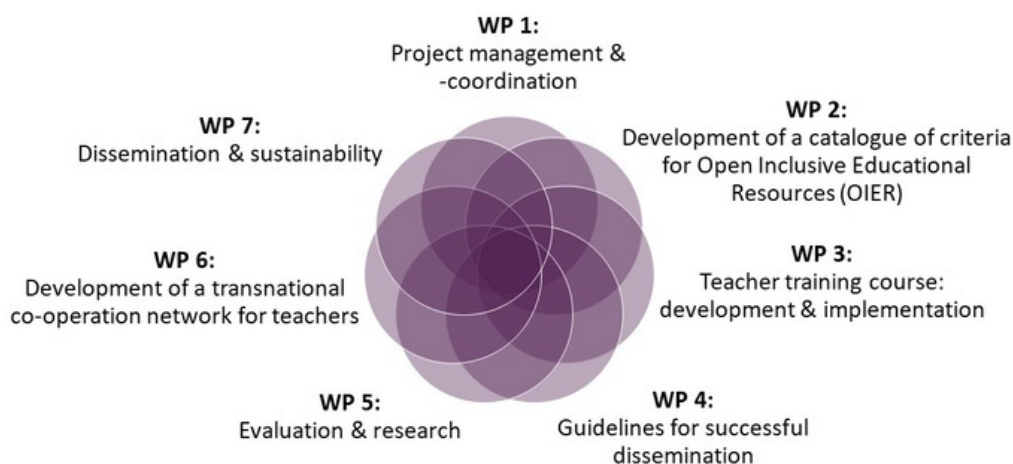


Figure 1.1: The seven work packages (WP) within the EQu-T project.

University of Graz: was responsible for WP 1, the overall project coordination. They managed the whole project, coordinated the different activities, assured that all partners worked efficiently together and gave their input and feedback to all project outputs and deliverables.

University of Granada: took care of WP 2, by conducting a comprehensive review of the international and European legal frameworks, standards and guidelines for a comprehensive approach to quality assurance in OIER. Furthermore, this partner developed and validated a criteria catalogue to check the quality of open inclusive educational resources.

University of Tallinn: was the leading partner for the development of a training program for pre- and in-service teachers. The aim of the training was to help teachers co-design, implement, and validate innovative teaching materials (Open Inclusive Educational Resources - OIER) and the creation of a MOOC for teacher trainers on OIER (WP 3).

University of South-East Norway: researched platforms for sharing teaching and learning materials and identified good practice examples for sharing and disseminating OIER (WP 4). This partner conducted a survey to discover the knowledge of teachers on OER and summarized the results in country reports on popular platforms for sharing, disseminating and retrieving teaching and learning materials. Finally, the team developed guidelines for the successful dissemination of quality teaching and learning materials as OIER.

University of Padova: took care of WP 5, the evaluation of the whole project. The team from Padova evaluated the most significant four outputs of the project to assure the best possible quality. Subject of the evaluation were the results developed within (a) WP 2, the criteria catalogue, (b) WP 3, the teacher training course, (c) WP 4, the dissemination guidelines, and (d) WP 6, the transnational network of teachers. This partner contributed to the quality of the deliverables by coordinating the collection of input and feedback from participants, experts and stakeholders in different countries.

University College for Teacher Education Styria: established a sustainable national network between teachers, school principals and other relevant actors in the field of inclusive and digital education for exchanging good practices of teaching (WP 6). Furthermore, the team established an international network to promote transnational collaboration and exchange of good practices regarding existing quality digital tools and materials (e.g., OIER) for inclusive teaching and embedding such resources in an inclusive educational context. The regular meetings enhanced experiences and knowledge regarding new approaches to inclusive teaching and digital technologies. The teachers could learn from the experiences of other countries and exchanged good practices in this international European context.

Private University College for Teacher Education Augustinum: coordinated WP 7 and addressed the development and elaboration of a sustainable dissemination and communication strategy for maximizing the impact of the project. This partner helped the consortium focus on sustaining project results by using different dissemination channels at the local, national and international level, via scientific publications, practitioners' publications, meetings, conferences, social media and digital platforms. The dissemination strategy made use of platforms with high visibility among teachers.



1.5 The main outputs of the project

The criteria catalogue, the recommendations and the checklist

In the first step of the project a comprehensive review of national and European regulations for inclusion, accessibility and OER was conducted and summarised in a comprehensive report. From this report the Dimensions and Subdimensions of the EQUI-T IA-OER Quality Framework were extracted. This extensive five- framework (Jiménez Hurtado et al., 2025a) was synthetised into a shorter set of recommendations for teachers (Jiménez Hurtado et al., 2025a). From these recommendations, as a last step we developed a short checklist (Jiménez Hurtado et al., 2025b) only containing the 10 most important points for a quick quality check. Finally, a Chatbot has been implemented for helping teachers easily develop accessible materials. The development process of the EQUI-T criteria catalogue for OIER quality assessment is outlined in Figure 1.2. More information on the criteria catalogue can be found in chapter 3.

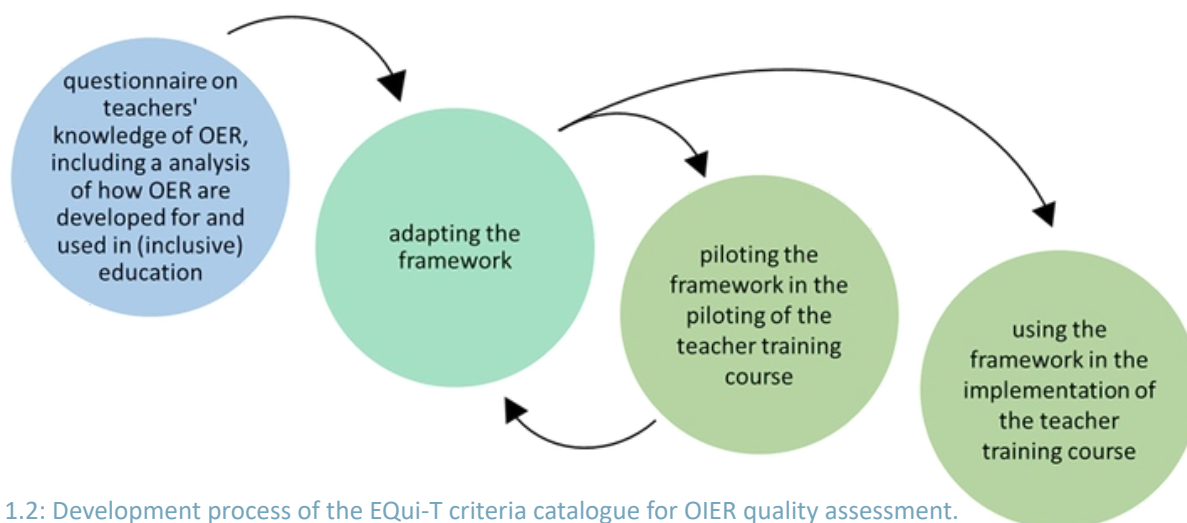


Figure 1.2: Development process of the EQuiT criteria catalogue for OIER quality assessment.



The teacher training

The curriculum for the teacher training and its implementation is the second main output of the project. It consists of five modules: (1) Inclusive Education, (2) Digital Competence, (3) Open Educational Resources (OER), (4) Design and Implementation of Open Educational Resources in Pedagogical Practice, (5) Evaluation and assessment of student learning.

The aim of the training (Figure 1.3) is to equip pre- and in-service teachers with the skills and knowledge required to effectively implement inclusive learning environments. By developing high-quality inclusive learning materials and lesson plans for (technology-enhanced) teaching the participants learn hands-on about inclusive didactics and strategies to meet the learning needs of all students in class. More information on the teacher training can be found in chapter 6.



Figure 1.3: Connecting three main aspects within the teacher training course.



The MOOC for teacher trainers

To ensure a long-term sustainability of the project results after its end, the teacher training curriculum is made available to teacher trainers across Europe who wish to deliver the EQuiT training. To this end, we have created a Massive Open Online Course (MOOC) containing an overview of the course content, all the necessary materials and pedagogical input on how to carry out the training effectively.

The course consists of six lessons structured around the core modules of the EQuiT curriculum:

1 Introduction to Inclusive Education

- Definitions and reflection on inclusion, diversity and equity
- History of inclusion: international frameworks and policies
- Teacher Mindsets and Inclusive Practices: bias, stereotypes, and reflective teaching

2 Differentiated Teaching and Learning

- Differentiation, Individualisation, UDL and diverse learner needs

3 Open Educational Resources (OER)

- Licensing
- Quality and Accessibility of OER: Evaluating and adapting resources for inclusion: the criteria catalogue
- OER platforms and dissemination guidelines

4 Design and Implementation of OIER

- Lesson planning, ICAP model
- Digital competence, tools and technology integration in OIER development

5 Evaluation and Assessment in Inclusive Classrooms

- Tools and strategies for inclusive evaluation

6 Teachers stories from the first cycle of the teacher training implementation

- Results and feedbacks from the first participants to the teacher training in 5 countries

Each chapter contains self-study materials (videos, readings, quizzes, power point for the teacher training), practical tasks and reflections and optional interactive elements (forums, Q&A sessions). The MOOC takes around eight hours to complete and allows users to contact the project team and ask questions for three years after the project ends.

**The teachers Handbook**

As last outcome, the present teacher's handbook will serve as guideline for teachers to know more about inclusion, accessibility, digital technologies in education and OER, bringing together the most important outputs and experiences from the project.

1.6 What happens next?

After the end of the project, the main focus will be on:

- maintaining the national and international networks;
- incorporating the training modules into university teaching courses and seminars,
- maintaining and advertising the MOOC, which can be used for continuing education programs as well as for independent professional development,
- creating and maintaining a chatbot based on our criteria catalogue to help teachers create material that can easily be adapted to the different needs of students.



1.7 Summary

The EQui-T project wants to improve inclusive education in Europe.

EQui-T is the name of the project.

Inclusive education means: all students learn together.

Experts from 5 countries work together in this project: Austria, Spain, Estonia, Italy, Norway.

EQui-T wants to help teachers.

Teachers work with many different students.

Every student has different needs for learning.

Teachers need good materials to teach all students.

One example is Open Educational Resources.

Open Educational Resources are teaching materials.

These materials are free to use.

Teachers can change these materials for their students.

Teachers can also share these materials with other teachers.

The EQui-T project has created a checklist for materials.

This checklist helps teachers to find out: Are my materials good quality?

EQui-T has also offered a training course.

In this training, teachers have learned how to create inclusive materials.

EQui-T has also created rules on how to find and share good materials.

These rules help teachers to find Open Educational Resources.

These rules also help teachers to share their own materials.

EQui-T has formed a network of teachers.

In this network, teachers and experts from all five countries can help each other.

They can also share materials.



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2 Inclusive Education

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2.1 Introduction

This chapter provides an introduction to inclusive education as a rights-based and process-oriented approach to teaching and learning. Inclusive education aims at equal participation of all students and reducing exclusion across educational systems. The chapter outlines the conceptual foundations of inclusion, tracing its historical development from exclusion and segregation to integration and inclusion. Following international frameworks such as the Universal Declaration of Human Rights, the Salamanca Statement, the UN Convention on the Rights of Persons with Disabilities, and the Sustainable Development Goals, the chapter emphasizes that inclusive education is both a legal obligation and an ethical imperative. Building on a broad understanding of inclusion, the chapter stipulates the complexity of learner diversity, drawing an intersectional perspective to understand how multiple factors can create barriers to participation. It highlights the importance of diversity-awareness and its opportunities for teaching, learning and social-emotional development. Key approaches for inclusive school development and teaching practice are presented, including the Index for Inclusion, Inclusive Inquiry, Universal Design for Learning (UDL), differentiation, and individualisation. Education for all requires teachers to design flexible, accessible, and responsive learning environments that foster participation. Open educational resources in particular offer significant potential for inclusive teaching.

2.2 The concept of inclusion: What are we talking about?

Inclusive education is defined as a continuous process aimed at ensuring that all learners, irrespective of their background or characteristics, have the right to high-quality education within mainstream settings by enhancing participation and responding to learner diversity (Ainscow, 2020; Ainscow et al., 2006). To achieve this, a systemic transformation of the education system is necessary moving beyond the historical focus on 'special needs.' This means addressing and removing barriers that historically limited participation for some students, such as learners with disabilities, linguistic minority backgrounds, or diverse cultural experiences (Slee, 2011). Inclusion is not only a change in terminology, but a fundamental paradigm shift in how educational systems are conceptualized and governed, rather than expecting the learner to fit into a pre-established system.

According to the EQui-T project's understanding, inclusion should be interpreted broadly, not only in relation to students with disabilities (which would be a narrow definition), but as a general social principle that concerns all people. In this perspective, inclusion addresses the multiple dimensions of diversity that shape participation in education and society:

"In our understanding, inclusion aims to **empower every person**, independent of their abilities, language, culture, religion, gender, media education, and literacy level, to participate in society actively and have a high quality of life. Inclusive educational settings grant everybody the right to be part of a high-quality education system. All students receive the attention, flexibility, remediation, and adjustments they need in a supporting social environment. The students' acquisition of competencies benefits from the existing, lived, and experienced diversity in educational settings"

(EQui-T, 2024).

Adopting this broad understanding of inclusion has important implications for education, which should focus on designing learning environments that anticipate and respond to the diversity of all students. Inclusion is therefore not a state that can be fully achieved, but an ongoing effort (Ainscow, 2020). In our EQui-T project we adopt this broad understanding of inclusion, asserting that an inclusive educational setting must **"provide a personalized educational response, rather than expecting the student to fit the system"** (Ainscow, 2020, p. 8).



Correct the mistake

- Common Misconception: Inclusion is a fixed state.
- But, actually: _____

ANSWER: inclusion is an ongoing process (Ainscow, 2024a; Ainscow et al., 2006).

2

2.3 The Origin of Inclusion: A Rights-Based Approach

The commitment to inclusion is strengthened by social and educational justifications that collectively form an ethical imperative for all educators and policymakers.

- The educational justification: developing flexible and responsive ways of teaching to address individual differences ultimately enhances the learning experiences and outcomes for all children, not just those identified as having specific needs (Ainscow, 2020). The pedagogical strategies necessitated by inclusion, such as clarity, multiple means of delivery, and flexible assessment, raise the standard of instruction for the entire cohort.
- The social justification: an inclusive education system is the bedrock for fostering a just, equitable, and democratic society. By bringing diverse learners together and affirming that "Every learner matters and matters equally" (Ainscow, 2024b), schools actively challenge prejudicial attitudes toward difference, combat discrimination, and cultivate a sense of belonging and mutual respect (Ainscow, 2020). From the perspective of educational equity, inclusion ensures that access to high-quality education is not contingent upon privilege or location.

2.4 Historical development from exclusion to integration and inclusion

When we see inclusion as a process, a historical glance into the shift from integration (students have to fit to the system) to inclusion (the system has to provide an adequate learning environment for all learners) gives important insights. During the last century the education systems across Europe and globally went through a transformation process from exclusion, segregation, integration towards inclusive education (see Figure 2.1).

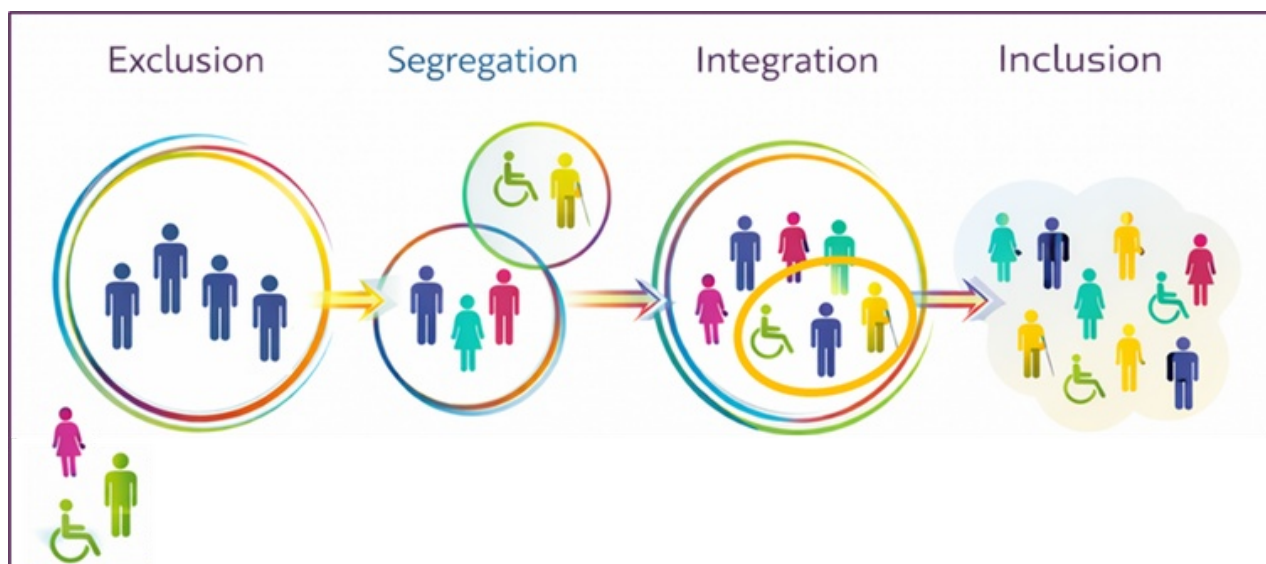


Figure 2.1: The historical development from exclusion, segregation, followed by integration and finally towards inclusion. Generated with ChatGPT (OpenAI, 2026).

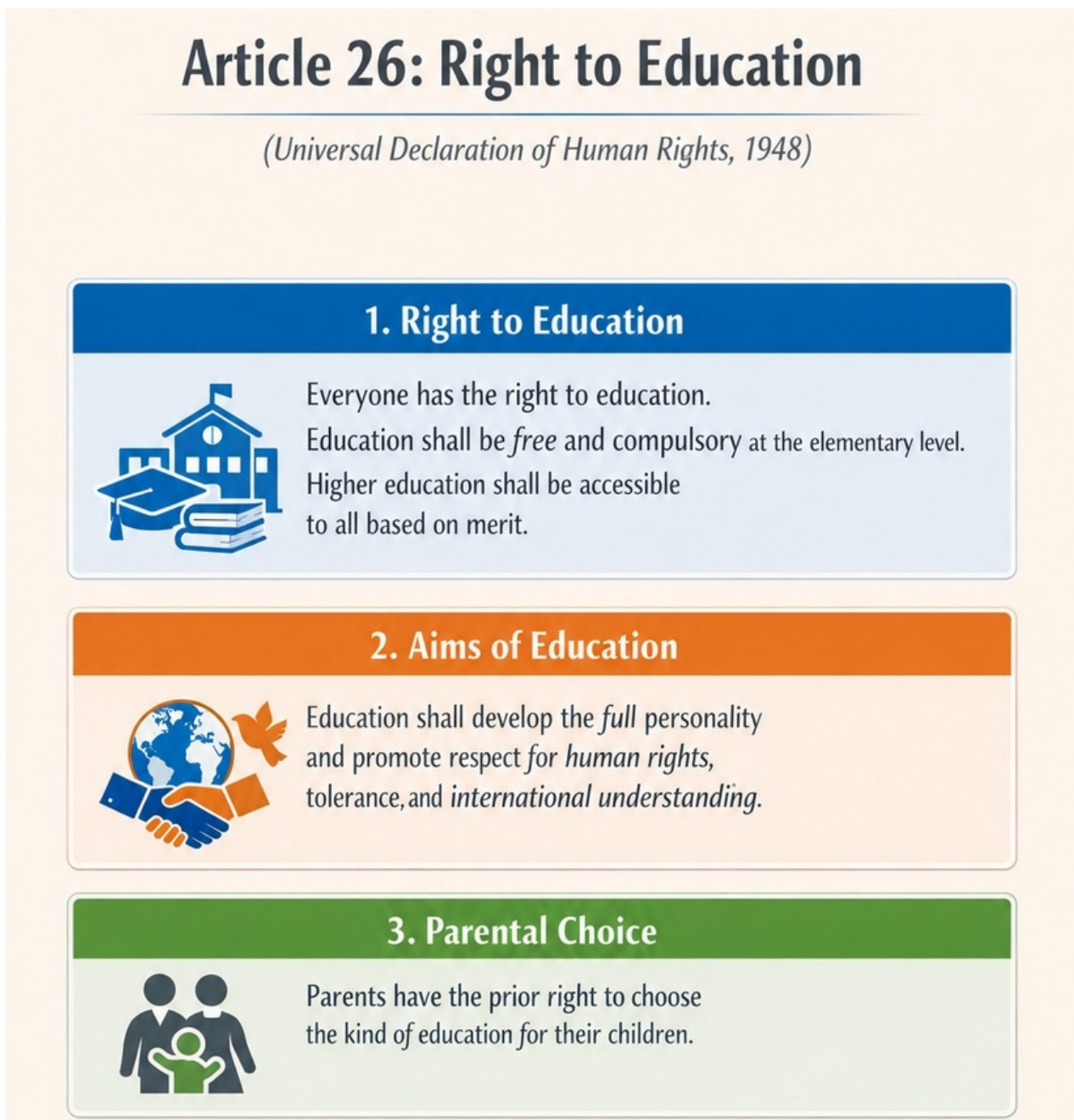
2.4.1 From Exclusion to Segregation: education as a fundamental right

The experiences of the Second World War and the Holocaust led to a widespread awareness that human dignity is indivisible, regardless of gender, nationality, skin colour, religion, language, social class, age or disability and must be universally recognised. This principle was enshrined in the Universal Declaration of Human Rights, the first article of which states: “All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.” (Article 1 of Resolution 217 A (III) of the General Assembly of 10 December 1948.) It is only needed to think about this sentence carefully to understand the core concept of inclusion.

To implement these fundamental human rights (see also Figure 2.2), further international instruments were developed and established. Of particular note are the Convention on the Elimination of All Forms of Discrimination against Women (1979) and ten years later the Convention on the Rights of the Child (1989), which focuses on the rights of children to grow up in a healthy environment, to express their own view and to be respected.

Particularly important is the fundamental right to education (Art. 26 of the Universal Declaration of Human Rights). It was the first global document that acknowledged education as a fundamental human right. Education should be free, compulsory at primary level, promote full development of the personality and respect for human rights. It is important to note that already in this Article 26 the right of parents to choose the kind of education for their child was established: “Parents have a prior right to choose the kind of education that shall be given to their children” (UN, 1948, p.7).

This document laid the foundation for all subsequent international mandates on inclusive education (UN, 1948).



2

Figure 2.2: Summary of article 26 of the Universal Declaration of Human Rights (UN, 1948). Infographic generated with ChatGPT (OpenAI, 2026).

2.4.2 Segregation: Separation based on differences

With the adoption of the Universal Declaration of Human Rights (UDHR) in 1948, states were called to guarantee education to all children, regardless of sex, ability, or social background.

Segregation in schools became the first common model of education for all children, where students were granted access but were separated based on perceived differences such as disability, language or social background (see Figure 2.3). Segregation attempts to create homogeneous groups of learners, where students within these groups often receive similar treatment, while differences between individuals are largely ignored.



Figure 2.3: Segregation.

Many countries continued to provide separate schooling for children with disabilities or those from minority or marginalized backgrounds. Special schools or segregated classes were seen as a practical solution to manage diversity, enabling intensive care and individualised answers to the person’s needs, but they reinforced social separation and inequality rather than fostering inclusion (Florian, 2008; Slee, 2011). This historical context helps explain why integration reforms emerged in the second half of the 20th century: countries began to question the fairness and effectiveness of segregated schooling and sought ways to bring children together in shared classrooms while still addressing individual learning needs.

Reflection box: The education system in your country

- Are there any special needs schools in your country?
- How are students with disabilities or those from minority or marginalized background educated?



2.4.3 Integration: Together but still divided

Following decades of segregation, the integration movement marked a significant step toward educational equity. In 1977, Italy introduced Law 517, which abolished special schools and initiated a shift toward integrative education (Florian, 2008; Slee, 2011). This reform was driven by social change and growing awareness of discrimination, new educational research advocating inclusive practices and political pressure from parents' as well as disability rights movements advocating for equal access to education (Brugger-Paggi, 2015).

The main goal of integration was to eliminate segregation and create a common school for all students. Integration aimed to foster greater equality by enabling children with and without disabilities to learn together. The guiding principle was to grant all people the greatest possible self-realisation through personal autonomy with the greatest possible social integration.

Integration involved adapting the existing school system so that students with different needs could participate in regular classrooms. For example:

- Students with disabilities were placed in mainstream classes rather than segregated schools.
- The curriculum was made more flexible, allowing teachers to adjust lessons and assessments to support all learners.
- Individual learning plans were introduced, and students were assessed qualitatively, rather than relying solely on grades or repetition (Brugger, 2016).

Although integration brought students together, it was not full inclusion. Key challenges included categorisations and heterogeneity.

As can be seen in Figure 2.4, in integration systems people and students are still divided into two groups: those with special educational needs and those without. This two-group model could create stigmatisation and reinforce the perception of difference (Luder, 2016). Teachers sometimes struggled with the “challenge of heterogeneity,” meaning differences among students were seen as obstacles rather than opportunities, partially because the schooling system itself was only partially modified, so students were integrated into existing structures rather than fully shaping the classroom experience (Bešić et al., 2017).

Despite these limitations, integration was a critical step forward. It acknowledged the rights of all students to participate together, laid the groundwork for inclusive policies, and began shifting attitudes toward diversity and equality in education.



Figure 2.4: Integration.

2



To the point: Historical development from segregation to inclusion

- **Exclusion** means being prevented from fully participating in social and educational life.
- In **segregation** learners are separated based on perceived differences, which reinforces inequality.
- **Integration** means that students with and without disabilities learn together in the same classroom, but divisions between those with and without special needs remain.
- **Inclusion** is:
 - valuing difference and diversity
 - grounded in human rights and aims at equal participation for all
 - not achieved when learners are physically present but unable to participate meaningfully
 - about transforming systems to meet diverse needs, not about fitting learners into existing systems.



Task:
Match correctly:

A) Exclusion

1. Learners are separated into different groups based on perceived differences.

B) Segregation

2. Learners are present in the same setting, but students with disabilities, for instance, are treated differently.

C) Integration

3. Learners are prevented from participating fully in social and educational life.

D) Inclusion

4. The system adapts to meet diverse needs, which enables all learners to participate meaningfully.

ANSWER: A → 3, B → 1, C → 2, D → 4

2.5 Inclusion: The Rights-Based journey

UNESCO World Declaration on Education for All (1990)

In this declaration the importance of education for personal and social development is empathised and it calls for an expanded vision and renewed commitment to basic education, for international co-operation and increased efforts to ensure that all people have access to basic education by the year 2000.

This expanded vision of education goes beyond access to education, but focuses on quality, participation and learning outcomes (see Figure 2.5). Therefore, universal access, especially for disadvantaged groups (e.g., girls, children with disabilities, children from low socio-economic-status families) should be facilitated. The overall aim of the declaration is to fulfil the basic learning needs of all people in order to promote personal development and social progress (UNESCO, 1990).



Figure 2.5: Summary of article 26 of the World Declaration Education for All (UNESCO, 1990). Infographic generated with ChatGPT (OpenAI, 2026).

2

Salamanca Statement and Framework for Action (UNESCO, 1994)

The Salamanca Statement was developed in 1994 during the World Conference on Special Needs Education held in Salamanca, Spain. It was the first document recognising internationally that Education must be Education for all -that means that nobody should be left out. The document emphasises “to promote the approach of inclusive education, namely enabling schools to serve all children, particularly those with special educational needs” (UNESCO, 1994, p.III). The Statement urged governments to adopt the principle of inclusion as a matter of law or policy and to enrol all children in regular schools unless compelling reasons necessitated otherwise.

The legacy of Salamanca is its affirmation that inclusion is not confined to disability, but is a global imperative to address the educational needs of "every learner" (Ainscow, 2024b). For further information on the articles of the Salamanca Statement, see Figure 2.6.



Figure 2.6: Summary of the articles of the Salamanca Statement (UNESCO, 1994). Infographic generated with ChatGPT (OpenAI, 2026).

The UN-Convention on the Rights of Persons with Disabilities - UNCRPD

One of the most significant legal instruments reinforcing the right to inclusive education is the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nations [UN], 2006). This UNCRPD was adopted in 2007, following a long preparatory period. Particularly noteworthy about this preparation was that people with disabilities themselves were involved in the drafting process and had a major influence on its final form. This is why fundamental changes in the view and definition of disability were implemented in the UNCRPD (UN, 2006). The convention adopted the social model of disability (disability arises from barriers in society, not from the individual), attributing disability to the social environment and taking visible and invisible disabilities into account. Therefore, the UNCRPD defines disability as follows:

“Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”

(UN, 2006, p. 4).

Unlike previous policy documents, the UNCRPD obliges signatory States Parties to recognise the right of persons with disabilities to education on the basis of equity, specifically mandating the implementation of an inclusive education system at all levels. It is particularly important to emphasise that this convention is **not** about obtaining special rights for people with disabilities, but ensuring the same rights for all in the first place.

The convention comprises 50 articles. For us particularly important is Article 24 on education affirming that every person with a disability has the right to inclusive, high-quality education that is free at all levels. Importantly, article 24 clearly states that persons with disabilities must not be excluded from the general education system on the basis of disability (UN, 2006). In other words, inclusive education is not optional, but a right. This requires the development of an education environment where effective, individualised support measures are provided within the general education setting, maximising academic and social development (Ainscow, 2005). The core principle of the article is the rejection of segregated settings, replacing them with a system designed to include all children and foster and value diversity.

A very important principle of the UNCRPD is the principle of reasonable accommodation. This principle refers to the necessary and appropriate modification and adjustments that do not impose a disproportionate or undue burden, where needed in a particular case, to ensure persons with disabilities enjoy all human rights and fundamental freedoms on an equal basis with others (UN, 2006). In the educational context (Art. 24), reasonable accommodation is distinct from the general provision of inclusive practice. While Universal Design for Learning (UDL, discussed in Section 4.1) aims to proactively design flexible curricula for all, reasonable accommodation addresses the specific, retrospective adjustments required for an individual student to fully participate and access the curriculum, thereby removing concrete, identifiable barriers to participation (De Beco, 2014).

The goal of Article 24 is not only to ensure that students with disabilities attend school, but that they truly belong, learn, and thrive there. Furthermore, it is about fostering respect for difference, diversity, and preparing all students to live and learn together in an inclusive school and later also in an inclusive society (UN, 2006). For further details see Figure 2.7.

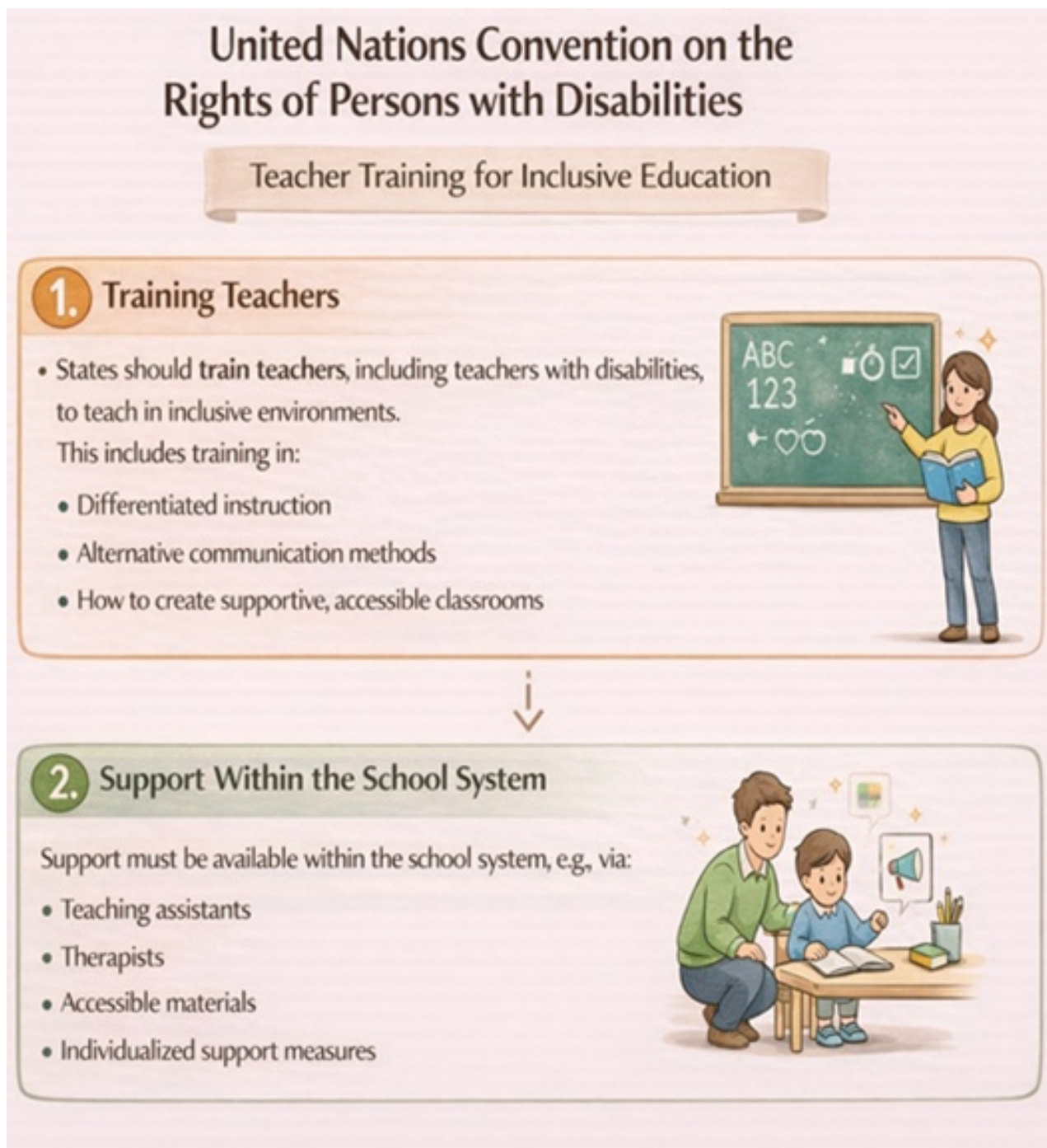


Figure 2.7: Summary of the key requirements of Article 24 with a focus on teacher training and school-based support systems (UN, 2006). Infographic generated with ChatGPT (OpenAI, 2026).

Sustainable Development Goal 4 (SDG 4) and the Education 2030 Agenda

The current global commitment is enshrined within the 2030 Agenda for Sustainable Development. The 2030 Agenda comprises 17 Sustainable Development Goals (SDGs) that are to be achieved by 2030. This agenda emphasises the transformative potential of information and communication technologies and global interconnectedness to accelerate human progress, bridge the digital divide, and foster knowledge societies (UN, 2015).

Sustainable Development Goal 4 (SDG 4) aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN, 2015) and focusses on equal access to early childhood education, primary and secondary education, vocational training and higher education, regardless of origin, gender, disability or other disadvantages.

SDG 4 positions inclusion as central to the entire development agenda. The language—inclusive and equitable quality education—signals a dual requirement: that education must not only be accessible to all (inclusion), but must also lead to comparable and meaningful outcomes for all learners (equity).

Particular emphasis is placed on the need to remove educational barriers for vulnerable groups (e.g., children with disabilities, girls, refugees, and people in rural areas; see Figure 2.8). With this, education is seen as foundational to development, not just a sectoral policy (UN, 2015).



Figure 2.8: Summary of the principles of the 2030 Agendas Goal 4 on Inclusive Education (UN, 2015). Generated with ChatGPT (OpenAI, 2026).



To the point: The Rights-Based journey toward inclusive education

- Inclusive education is rooted in international human rights and has developed over time.
- Key frameworks progressively strengthened the right to inclusive and equitable education, such as:
 - Universal Declaration of Human Rights (1948)
 - World Declaration Education for All (1990)
 - Salamanca Statement (1994)
 - United Nations Convention on the Rights of Persons with Disabilities (2006)
 - Education 2030 Agenda - Sustainable Development Goal 4 (2015)
- The focus has shifted from access to participation and further to full inclusion and equal opportunities.
- Inclusive education is a legal and ethical responsibility, not an optional approach.



Task

Tick the correct box:

True or False?

True

False

1. Inclusive education is optional for education systems

2. The right to education was first established in the Universal Declaration of Human Rights.

3. The UN Convention on the Rights of Persons with Disabilities is legally binding for state parties who have signed the declaration.

4. The UNCRPD aims to provide special rights exclusively for persons with disabilities.

5. Inclusive education means adapting learners to the existing education system.

6. The concept of inclusion has shifted from separating learners to educating all learners together.

ANSWER: 1 = False, 2 = False, 3 = True, 4 = True, 5 = False, 6 = True

2.6 Diversity and intersectionality in the classroom

Inclusive education, as mandated by the UNCRPD and framed by scholars like Ainscow (2024), requires moving beyond the traditional focus on disability to embrace a broad understanding of diversity present within the general school population. This broad understanding of inclusion acknowledges that learner variability is the norm, not the exception, and that educational systems must respond to the full spectrum of human difference.

Focus box: intersectionality.

Different dimensions of diversity can come together in one person at the same time. It is therefore important to understand, that especially when a person is attributed to multiple marginalised identities (e.g., a female, second-language learner with a learning disability), barriers to participation can accumulate. The concept that multiple social identities overlap or intersect, creating compounded experiences of discrimination or privilege, is called “intersectionality” (Bešić, 2020; Crenshaw, 1989). In education intersectionality means that many children experience discrimination through the interaction of several characteristics.

This working definition extends the concept of diversity into several critical dimensions beyond impairment:

Elements of diversity in a classroom can encompass:

- **Socio-cultural Diversity:** Differences arising from ethnicity, cultural and linguistical backgrounds (including bi- and multilingualism), religion, etc.
- **Cognitive and Learning Diversity:** Variations in processing speed, memory, executive functioning, prior knowledge, motivation, and specific learning preferences.
- **Socio-economic Diversity:** Disparities stemming from family income, access to resources, and social capital, which can significantly impact students’ readiness to learn and educational outcomes.
- **Affective Diversity:** Differences in emotion regulation, temperament, and mental health status.
- **Disabilities (visible and invisible):** For example, due to mobility or sensory disabilities, learning difficulties, neurodevelopmental disorders (autism spectrum disorder, ADHD/ADD), etc.

Acknowledging this extensive scope means that effective inclusive practice necessitates pedagogy capable of addressing highly complex and multifaceted needs, moving beyond a single, targeted intervention approach.

Although **diversity** is often seen as a challenge from teachers, it is actually an **opportunity** for education. In heterogeneous learning environments, inclusion therefore means creating conditions where diversity of different students is **recognised, valued and supported**.

2.7 School development towards inclusion: The Index for Inclusion

An important framework for implementing inclusion in schools is the Index for Inclusion. Developed by Tony Booth and Mel Ainscow (2002). The Index aims to support schools in their development towards greater participation and is not a step-by-step guide for implementing inclusion, but rather a conceptual framework for accompanying that process. The Index for Inclusion focuses on three areas: inclusive cultures, structures, and practices.

Inclusive cultures are understood as the foundation and prerequisite for the inclusive development of the school. They refer to the values and fundamental attitudes of all stakeholders, namely school leadership, teachers, parents, and students. Alongside the development of these attitudes, school structures must be transformed to actively support inclusion. Inclusion requires the ongoing development of inclusive practices, grounded in lived experience. Central to this is the idea that the practical experiences of those involved are at the heart of the process: new experiences, accumulated day by day, contribute to making schools more inclusive, to overcoming barriers, and to enabling greater participation. The Index for Inclusion is organized into five major sections (Figure 2.9):



Figure 2.9: Sections of the Index for Inclusion (Booth & Ainscow, 2002). Generated with ChatGPT (OpenAI, 2026).

The framework is organized around three dimensions:

- **Dimension A – Creating Inclusive Cultures:** Building community and establishing inclusive values
- **Dimension B – Producing Inclusive Policies:** Developing the school for all and organizing support for diversity
- **Dimension C – Evolving Inclusive Practices:** Orchestrating learning and mobilizing resources

Central to the Index is a shared understanding among all participants of what inclusion means in practice. This encompasses (Booth & Ainscow, 2002, p. 3):

- valuing all students and staff equally;
- increasing the participation of students in, and reducing their exclusion from, the cultures, curricula and communities of local schools;
- restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in the locality;
- reducing barriers to learning and participation for all students, not only those with impairments or those who are categorised as ‘having special educational needs’;
- learning from attempts to overcome barriers to the access and participation of particular students to make changes for the benefit of students more widely;
- viewing the difference between students as resources to support learning, rather than problems to be overcome;
- acknowledging the right of students to an education in their locality;
- improving schools for staff as well as for students;
- empathising the role of schools in building community and developing values, as well as in increasing achievement;
- fostering mutually sustaining relationships between schools and communities;
- recognising that inclusion in education is one aspect of inclusion in society.

2.8 Principles for Inclusive Practice: Inclusive Teaching

Inclusive teaching with diverse learners needs a shift from reactive measures to proactive design.

This can be achieved by:

- developing teaching models that “work for all”, that observe learning processes, include the voices of students and evaluate and adapt constantly the own teaching process;
- anticipating the diversity of learners and ensuring that instruction is flexible enough to accommodate the full spectrum of learner needs.

According to Prengel (2018), inclusive didactics has two key components: mandatory elements, which must be clearly defined for all students and optional elements. To ensure equal opportunities among diverse student groups, a core curriculum is needed that can be highly adapted following individual necessities. This enables teachers to set individualised learning goals and monitor progress on a case-by-case basis. Thus, every student can learn within their zone of proximal development (Vygotsky, 1978) and expand their individual competencies. To achieve this, it is first necessary to identify the skills through individual assessment, upon which learning goals and, thus, the next steps, are based. This model can be applied to both gifted students and children with learning difficulties. The optional elements can follow special interests, can be chosen individually from the students and complement the obligatory part.

This type of inclusive teaching approach engages all students, not only in an academic sense, but above all in terms of their social-emotional development.

The school classroom is one of the central social groups in children's lives. During this early stage of development, students spend many hours together in an environment that strongly influences their identity development, motivation to learn and sense of belonging (Osterman et al., 2000).

As emotions are the gatekeepers of learning, children's socioemotional **well-being** is **critical to school and educational success** (Bergin & Bergin, 2009). Therefore, the feeling of belonging and to be included can improve their learning, motivation and social-emotional development, participation, and lower rates of school withdrawal or disengagement (Anderman, 2002; Juvonen, 2006; Roeser et al., 1996).



Figure 2.10: Belonging brings comfort, confidence and a sense of connection in everyday interactions positively influences an individual's: health, abilities, relationships and overall well-being. Generated with ChatGPT (OpenAI, 2026).

It contributes to better academic outcomes and better physical and mental health (Baumeister & Leary, 1995), which should be supported through inclusive practices.

When educators intentionally foster belonging (see Figure 2.10) through inclusive curriculum design, culturally responsive pedagogy, and supportive classroom relationships, they create spaces where all students can thrive academically, socially, and emotionally (Gay, 2018; Hammond, 2015; see Figure 2.11).

Creating a classroom climate in which every student can participate, contribute, and feel that their identity and experiences are respected, can be achieved by different ways. One model for inclusive teaching is the Inclusive Inquiry Model (Ainscow & Messiou, 2025)



Figure 2.11: Importance of creating an inclusive classroom climate. Generated with ChatGPT (OpenAI, 2026).

2.8.1 The Inclusive Inquiry-Model

Based on the model of a Lesson Study, Ainscow and Messiou (2025; Messiou & Ainscow, 2020) developed the concept of Inclusive Inquiry. It is a model of lesson development that aims to further develop teaching in a way that all students can participate. The core principle is to find the best way of learning for all students, with a particular focus on those who are difficult to reach. This "difficult to reach" can be grounded in social-emotional factors, or also in relation to the academic performance of the children. The model is designed to be flexibly adapted to the needs of the students. It is about professional development of one's own teaching practice, about learning from experience. A central element is, on the one hand, the process of further development within a team, summarised as Plan à Teach à Analyse, and on the other hand, the involvement of students as experts in a participatory form. Students are regarded as experts for their own learning and can contribute as researchers, thereby helping to further develop the lesson.

1. **The planning of the lesson:** Three teachers come together to form a team. The lesson is jointly prepared by this team of three teachers. Three students from each class (sometimes the entire class) are trained as student researchers for their own learning.
2. **The teaching of the lesson:** One teacher teaches the lesson. The student researchers observe the lesson and collect the feedback of their peers.
3. **Analyse the lesson:** After the lesson, a joint reflection takes place, in which the students also contribute in their role as researchers. The dialog between the teachers and students after the lesson is called "inclusive Inquiry". At the center of this dialog the question is: how can we make the lesson more inclusive? How can we reach all students, how can we better learn and support learning all together? The central focus is always on participation of all students in the lesson. Also, it is not on the teachers, but rather on the question of how the lesson can be accessible to all. After the joint reflection, the lesson is revised; the next teacher delivers the lesson, the team again discusses it together, and suggestions for improvement are developed.

The model has been trialled in different countries and has proven to be very effective, even though teachers report that their workload increased due of the joint discussions (Messiou et al., 2020; Messiou & Ainscow, 2020).

2

2.8.2 Universal Design for Learning (UDL): A Proactive Framework

One approach to implementing inclusive pedagogy is the Universal Design for Learning (UDL) framework. UDL provides practical guidance for proactively designing curricula that are accessible to the widest range of learners from the start.

Traditional educational materials and teaching approaches frequently assume a "one-size-fits-all" learner. When instruction is designed in this way, some students inevitably encounter barriers to participation and learning. Instead of relying on individual adjustments after barriers arise, UDL proposes a proactive approach to curriculum design. It aims to create learning environments that are flexible, accessible, and usable by as many learners as possible, reducing the need for retrospective modifications or accommodations (Capp, 2017; Seale et al., 2022).

UDL is structured around three core principles, each connected to different learning processes (CAST, 2018):

UDL Principle	Brain Network Addressed	Goal
Multiple Means of Representation	Recognition Networks (The What of Learning)	Provide content and information in varied formats (e.g., text, audio, video, manipulative), ensuring that all learners can access the information regardless of sensory or cognitive ability.
Multiple Means of Action and Expression	Strategic Networks (The How of Learning)	Offer flexible options for demonstrating knowledge (e.g., written essay, oral presentation, digital media project), allowing students to leverage their strengths and support their planning and execution skills.
Multiple Means of Engagement	Affective Networks (The Why of Learning)	Tap into learners' interests, challenge them appropriately, and offer choices to foster self-regulation and motivation, ensuring the learning is relevant and sustained.

The consistent application of UDL principles transforms the curriculum from a rigid requirement into a flexible framework, ensuring that the diversity is leveraged as a resource rather than viewed as a barrier (Bacon, 2026).



2.8.3 Differentiation and inclusive teaching

While UDL provides a framework for curriculum design, at class level, individualisation and differentiation can help teachers to adjust instruction to the needs of all learners. Differentiation and individualization are two central concepts for adjusting learning to the needs of diverse learners. Differentiation can be internal (within the classroom, like grouping of students for some tasks) or external (outside the classroom, like special classes and regular classes). Internal differentiation can focus on different areas: The proactive modification of the content (what is learned), the process (how it is learned), or the product (how learning is assessed) based on a teacher's ongoing assessment of student readiness, interests, or learning profile. Differentiation typically involves adjustments for groups or the whole class (Jaworska & Jaroszewska, 2024; Trautmann & Wischer, 2011).



Individualization on the other side means following the individual learning process of each student. This includes the creation of specific, highly tailored learning goals, often formalised through a legal document (e.g., an Individual Education Plan), for one student whose needs cannot be met through differentiated instruction. Responsive teaching adapted to the individual needs of students requires the teacher to constantly use diagnostic assessment to guide real-time adjustments, ensuring that instruction is adapted at the student's zone of proximal development (Vygotsky, 1978).

2.9 Open Educational Resources

Implementing inclusive pedagogy practices through differentiation, individualisation and/or the Universal Design for Learning requires instructional materials that are **flexible, editable and adaptable** (Wiley & Hilton III, 2018). Traditional, copyrighted resources (e.g. textbooks, where all rights are reserved) often present fixed content, rigid formats, and a single mode of representation, which can create structural barriers to participation (Baugher, 2025).

Open Educational Resources (OER) offer a solution. By definition, OER are teaching, learning, and research resources that grant users the **5R permissions: Retain, Reuse, Revise, Remix, and Redistribute** (UNESCO, 2019; Wiley, n.d.; Wiley & Hilton III, 2018). This flexibility enables teachers to modify resources proactively to meet diverse learner needs, rather than retroactively adapting fixed materials (Capp, 2017).

OER offer not only an economic advantage, being free of costs, but they are also a pedagogical necessity. OER can support teachers in their inclusive teaching, because:

- the adaptability of OER allows teachers to differentiate instruction, tailoring materials to the needs of groups or individuals;
- teachers can revise or remix content (e.g., turning text into audio-visual materials) to provide multiple means of representation, action and engagement for learners with different abilities and learning profiles;
- teachers can adapt resources for cultural and linguistic relevance, enhancing accessibility for students from diverse backgrounds (Hilton III, 2016; Wiley & Hilton III, 2018).

The legal and practical flexibility of OER provides the structural support for teachers to implement UDL and differentiation effectively, transforming the ethical mandate for inclusion into practical classroom reality. **More on OER in the next chapters.**

2



To the point: Principles for Inclusive Practice: Inclusive Teaching

- Inclusive teaching improves learning by making teaching more responsive to learners' needs.
- An intersectional perspective helps identify complex barriers to participation.
- Equitable teaching involves allocating resources and support based on learners' needs.
- Differentiation and individualisation enable responsive instruction.
- Universal Design for Learning (UDL) supports flexible and accessible curriculum design and prevents retrospective adaptations.



Task:

Complete the sentence:

Inclusive teaching does not mean treating all students the same.

It means responding to _____ needs in an _____ way.

to different needs in an equitable way

ANSWER: Inclusive teaching does not mean treating all students the same. It means responding



2.10 Conclusion

The central claim of this chapter is that inclusive education is not an optional pedagogical approach, but a rights-based mandate, as well as an ethical imperative. The conceptual framework, informed by scholars such as Ainscow (2024; Ainscow et al., 2006), defines inclusion as an ongoing process aimed at removing barriers, progressively increasing the participation of every learner and dismantling all forms of educational exclusion. The commitment for a transformation in an inclusive education system is legally underpinned by Article 24 of the UNCRPD (UN, 2006) and validated by the global equity agenda of SDG 4 (UN, 2015).

To translate these principles into practice, teachers need to actively engage with classroom diversity through an intersectional lens. This means moving beyond single-deficit perspectives and recognising how multiple dimensions of identity, such as ability, language, and socio-economic background can interact, creating barriers to learning. Addressing this complexity requires a shift in pedagogy and the adoption of innovative design principles, such as UDL (CAST, 2018), differentiation and individualisation of material and teaching strategies. Including the voices of students to remove barriers to education and to enhance teaching practices proved to be a successful strategy to enhance teaching practices. These approaches enable teachers to respond to learners' needs through continuous adjustments of learning content and processes.

However, effective implementation depends on the flexibility of instructional resources. Traditional materials, that are fixed and non-adaptable, can limit teachers' ability to personalise learning and respond to diversity. Inclusive pedagogy is therefore not only a matter of teaching strategies, but also of resource design and accessibility. Chapter 4 explores how Open Educational Resources (OER) provide the flexibility needed to support inclusive teaching and the development of high-quality, adaptable, and equitable learning experiences for all students



FUN with FACTS

- **Paradigm Shift: Inclusion as a Process**

Inclusion in a system can never be fully or permanently achieved. The focus should be on increasing participation and reducing exclusion within the culture, policy and practice of the system (Ainscow, 2024a).

- **Legal Mandate: Rights-Based Framework**

Inclusive education is a legal requirement rooted in international frameworks such as the United Nations Convention on the Rights of Persons with Disabilities (Article 24; UN, 2006) and the Sustainable Development Goal 4 (UN, 2015), ensuring equal access to high-quality education for all learners.

- **Diversity Scope: Intersectionality**

Learners may experience overlapping barriers due to multiple dimensions of identity (e.g., ability, language, socio-economic background), requiring nuanced and context-sensitive support.

- **Pedagogical Strategy: Proactive Design (UDL)**

Learning environments and materials should be designed to be inherently accessible to all learners from the outset, based on the three principles (Representation, Action/Expression, Engagement).

- **Resource Imperative: Flexibility and Adaptability**

Successful implementation of UDL and Differentiation requires instructional resources that can be legally Revised and Remixed, establishing OER as a structural necessity for inclusion (Berger et al., subm.).

2

Notes

2.11 Summary

All students have a right to go to school.

Inclusion means: all students learn together.

Schools must change to fit the students.

Students do not have to change to fit the school.

Inclusion is a process.

This process is never finished.

In the past, some children were not allowed to go to regular schools.

Now, we want all students to feel welcome.

Diversity is something positive for every classroom.

Diversity means: students are all different from each other.

Teachers should give students many ways to learn.

Students can also learn from each other.

This is possible when teachers use Open Educational Resources.

Open Educational Resources are teaching materials that are free to use.

Teachers can change these materials to help their students.

Every student is important.



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3 OER for All: Inclusion through Accessibility

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3.1 Introduction

What do we mean when we talk about Accessibility?

Accessibility refers to the design and delivery of products so that they can be used by all individuals. When accessibility is achieved, usability – the ease and effectiveness of use – remains consistent for everyone. Individuals can navigate spaces, use technologies, and access information without barriers, in approximately the same time and effort as their peers.

For Open Educational Resources (OER), this principle is essential: all learners must be able to use them, regardless of their circumstances or abilities. OER are accessible when they present information and activities that are easy to perceive and understand for all learners, regardless of their individual requirements or abilities.

This chapter provides an overview of accessibility recommendations from the EQuI-T Criteria Catalogue for creating or adapting OER. For more information on OER see chapter 4.

Using the EQuI-T Framework for the Creation and Assessment of Accessible OER

Understanding what accessibility requires is an essential first step, but translating that understanding into practice demands a structured, reliable tool. The EQuI-T Criteria Catalogue provides exactly that.

Developed through an international collaboration of European universities and teacher education institutions as part of the Erasmus+ EQuI-T project, the Criteria Catalogue is designed to support teachers in evaluating and producing OER that are truly accessible, inclusive, and adaptable to the needs of all learners – including those with disabilities or specific educational needs.

The framework is organised around four core dimensions: inclusive didactics, the technical and technological dimension, diversity sensitivity, and accessibility. Together, these dimensions address the full range of considerations that determine whether OER are fit for use in inclusive teaching. The accessibility dimension – the focus of this chapter –encompasses sensory, cognitive and technological accessibility. It provides guidance on specific practices such as audio description, captioning, alternative text, and Easy Language. Each dimension in the Criteria Catalogue is accompanied by concise, evidence-based recommendations, illustrative examples drawn from classroom practice, and a downloadable checklist that teachers can use to support reflection and implementation.

The Criteria Catalogue is designed to be used in two complementary ways:

- When creating a new OER, it is used as a design guide, allowing creators to follow its recommendations step by step for each dimension. Addressing potential barriers during creation is almost always less time-consuming than adapting an existing resource.
- When evaluating existing OER, it serves as an audit framework with checklists, which allow users to work systematically through each dimension, identifying gaps and deciding whether the resource requires adaptation before it can be used.

In both cases, the framework encourages a reflective rather than a prescriptive approach. Each dimension can be read as a standalone reference, but together they form a coherent approach to creating OER that genuinely serve all learners. Not every recommendation will apply equally to every type of resource or every classroom context, and the catalogue is not intended to generate a pass-or-fail score. Rather, it is a tool for structured professional judgement – a means of ensuring that the accessibility of your materials receive the sustained, principled attention that inclusive education demands.

3.2 Inclusion Through Technology: Usability and Accessibility for OER

For OER to be useful in a school setting, it is essential that they are designed to be user-friendly, visually appealing, and capable of adapting to students' different needs. Creating accessible, clear and usable OER involves addressing several key design aspects so that every student can effectively achieve their educational goals independently. The most important elements to bear in mind are outlined below.

- Customisation and adaptability: Content and activities must adapt to students' individual needs. They should be easily modifiable, reorganisable, or expandable to suit different learning paces. Selecting editable formats and ensuring access to required technological resources enables students with special needs to engage fully with the OER.
- Format: Resources should be compatible with multiple devices (tablets, computers, interactive whiteboards, etc.), usable across diverse educational settings, and accessible both online and offline.
- Visual design: A simple, clear, and consistent visual design captures learners' attention and guides focus towards the most important content elements. Incorporating headings, colour, images, menus, icons, and varied typography (font type and size), along with familiar language, creates an enjoyable, accessible experience.
- Navigation: Navigation should be intuitive. Learners must always know where they are, what options are available, and how to move forwards or backwards within a resource. A simple, effective, and logical structure prevents wasted time and supports learning.

3

3.2.1 Technological Accessibility

Technological accessibility refers to the design and development of digital products, devices, software and services (websites, apps) so that everyone, including those with disabilities, can use them independently and without barriers. It seeks equality in access to information and functionalities by adapting technology to the needs of each user. Where students are end-users, the resources, materials, content and platforms used in teaching must be technologically accessible.

This section reviews guidelines focused on the format of multimedia materials used in teaching, along with specific recommendations for websites and apps.

3.2.2 The Accessibility of plain texts

Legibility and comprehension form the foundation of accessible text in OER. Several key principles ensure that all learners can engage effectively with written content:

- Sans-serif fonts with appropriate spacing and left-justified alignment support comfortable reading. Italics and bold text should be minimised in body text.
- Clear contrast between text and background colour, combined with adjustable text size, removes visual barriers for readers with low vision.
- Language specification for screen readers enables assistive technologies to render content accurately.
- Multiple modes of information delivery – combining text with audio, images and graphics – reinforce understanding and accommodate diverse learning preferences.
- Visual placement and orientation can convey meaning alongside or instead of text alone.

Examples of accessible and non-accessible text

Example 1: Accessible for early learners

Fir trees are tall trees of the pine family. They have needle-like leaves and cones to hold the seeds. They can be distinguished from other trees by the way in which their leaves are attached to the branches: singly and with a circular base. Their cones are also different because they stand upright on the branches like candles

Example 2: Not accessible (Complex for children; small, difficult-to-read fonts; insufficient contrast; excessive bold formatting)

Fir | Description, Uses, & Species | Britannica

*The fir tree, (**genus Abies**), genus of more than 40 species of evergreen trees of the conifer family **Pinaceae**. **Although** several other coniferous trees are commonly called firs—e.g., the **Douglas fir (Pseudotsuga)**, the hemlock fir (**see hemlock**), and the joint fir (**see Ephedra**), true firs are native to North and Central America. They can be distinguished from other members of the pine family by the way in which their needle-like leaves are attached singly to the branches with a circular base, and by their cones, which, like **those of cedars**, stand upright on the branches like candles and disintegrate at maturity*

3.2.3 Structuring tables and lists

- Tables benefit from clear headers that repeat on every page when a table spans multiple pages – this allows screen readers to recognize the structure and reorient listeners with each new section. Merged cells and empty cells should be avoided to maintain clarity and consistency.
- Lists created with the “Create List” function enable screen readers to recognize both the number of items and their sequence, supporting systematic navigation.
- Document structure relies on consistent heading styles to identify and number sections. This approach automatically generates a table of contents in PDFs created from the document and allows screen readers to navigate hierarchically through content.

3.2.4 What images to use

Images supplement and clarify text effectively when they meet specific quality and accessibility standards. The following characteristics ensure images serve all learners:

- High quality and good resolution with clear visual detail.
- Sufficient contrast between foreground and background.
- Adequate size to permit details to be visible.
- No embedded text.
- Alternative text that describes the image and can be read by screen readers.



Figure 3.1: Fir branch images. Source: Pixabay Content Licence.

The image on the left in Figure 3.1 demonstrates adequate quality; the middle image is unsuitable due to its unclear and small appearance; the right image is also unsuitable because it contains text that screen readers cannot access. The alternative text for an accessible version would read: “A fir branch with needle-like leaves”.

3.2.5 Digital Learning Resources in Audio Format

Audio files – such as music or podcasts – require specific attention to clarity and accessibility. The following recommendations ensure all learners can access audio content effectively:

- Clear audio recordings with appropriate tone, duration, and volume.
- Background noise or music reduction features allow listeners to focus on the spoken content.
- Good pronunciation and diction from speakers, along with sufficient pauses, support comprehension when multiple speakers are involved.
- Transcripts of the audio enable learners with hearing impairments to access the content. Transcripts can also be translated, simplified, or used for exercises.

3.2.6 Digital Learning Resources in Video Format

Videos are widely used educational resources that engage learners, stimulate curiosity and meaningful learning, encourage student participation, and facilitate participatory and critical classroom activities. The following recommendations support accessibility:

- High-quality video and audio form the foundation of accessible video resources.
- Audio description ensures that learners with visual impairments can understand the material.
- Text transcripts, subtitles, and sign language support learners with hearing impairments.
- Adaptation to different age groups and availability in multiple languages extend the resource's reach to diverse audiences.

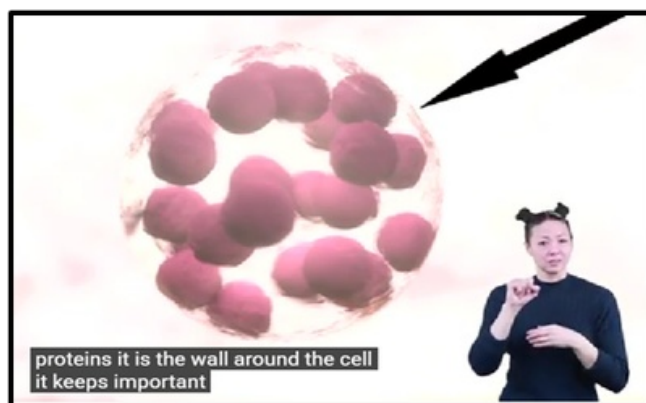


Figure 3.2: Example of an accessible video about cells.

Figure 3.2 illustrates how a learning video prepared for diverse learners' needs – specifically children – might incorporate captions, sign language, and a transcription of the audio that learners can read alongside the speaker's description of the content.

Part of the transcription of the example:

3:05 fluid cytoplasm gives cells its shape

3:08 and holds everything in place the cell

3:11 membrane is made up of fats and

3:14 proteins it is the wall around the cell it keeps important

3:18 things inside like nutrients and

3:20 unwanted things out like...

3.2.7 Webs and Apps

The World Wide Web Consortium (W3C) provides accessibility guidelines that must be followed when developing accessible web and mobile applications. Below, the most relevant guidelines are listed, with examples of screens from an accessible app shown.

- Applications must be simple and clear.
- It is important to maintain consistency throughout the application in the identification and appearance (shape, size, colour, location) of elements that have the same functionality (links, icons, buttons).
- All screens should have a descriptive title indicating their purpose or function.
- Interactive elements, such as buttons, lists or menus, should be large and include images; they should be well-spaced and highlighted when interacted with.
- In the case of hyperlinks, it must always be made clear where they lead.
- Options should be provided to pause, stop or hide any information that moves, flashes, updates automatically or scrolls.
- Learners should be allowed to decide how much time they need to read, view, listen to, understand content or perform an action.
- It must be ensured that all the content and functionalities of the application are compatible with assistive technologies, such as screen readers, push buttons or eye-gaze access devices.

Learners should be able to check their progress and receive feedback and reinforcement regarding the results of their actions.

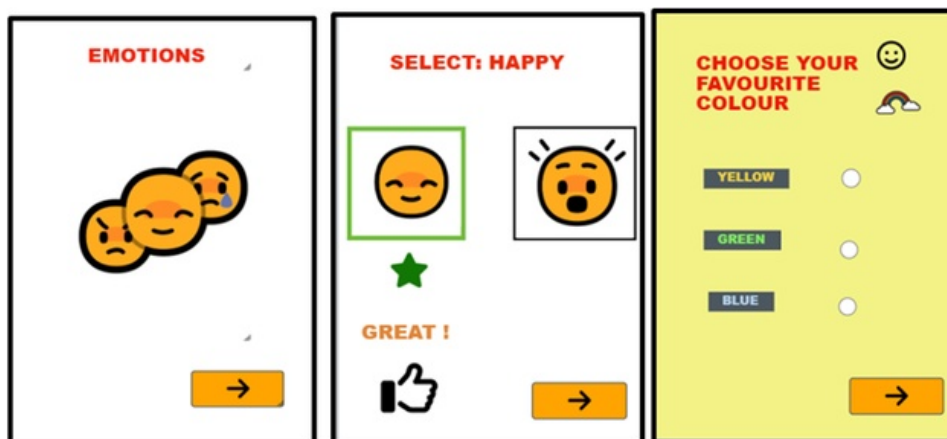


Figure 3.3: Example of an accessible App. Source: own work with code.org. Pictograms from Stellar Symbols. By Colin McNamee and Mulberry Symbols. By Steve Lee. Creative Commons BY SA 4.0.

Figure 3.3 presents three screenshots of an app. The screens are simple, all of them have a title to identify their purpose. Their buttons are in the same place and with the same style. All the interactive elements have alternative text or audio that can be listened to when the user interacts with them. However, the screen on the right is not fully accessible for people with difficulties differentiating colours. Besides, the font used to write the names of the colours is small for people with low vision. The radio buttons are also too small to interact with, making it difficult for people with motor disabilities to access.

3.2.8 Educational games

Educational games promote holistic development by combining fun with learning, boosting motivation, and fostering social, emotional, and cognitive skills such as memory, attention, and the understanding of complex concepts. An accessible educational game should include certain accessibility features:

- Its objectives must be easy for all learners to understand.
- It must be easy to learn but difficult to master, without placing too much cognitive or motor load on the player.
- Its interface and interaction methods must be customisable.
- It must include subtitles and audio descriptions to reach more learners, including stereo, binaural, or surround sound for locating elements on the screen.
- Learners must feel that their actions are meaningful, with a direct effect and an immediate response, so that they have a sense of control.
- The game's challenges must be structured so that learners apply the knowledge gained from previous problems to solve the next ones.

3.3 Sensory Accessibility

3.3.1 Accessible OER for Blind and Partially Sighted Learners

1. Audio Description of Static Images in Open Educational Resources

Images pervade educational materials – photographs, diagrams, illustrations, maps, infographics, slides. For sighted learners, these resources can make abstract ideas tangible, provide context, and sustain engagement. For learners with visual impairments, however, an image without an accompanying verbal description remains, in effect, invisible. Audio description (AD) bridges that gap by translating visual information into spoken or written language, allowing all students to access the same content. Well-crafted AD ensures that students with visual impairments can engage with your materials on an equal footing and, incidentally, often benefits learners with other needs, such as those accessing content in low-bandwidth environments.

The EQui-T Framework developed within this project sets out a structured set of evidence-based recommendations for producing audio descriptions suitable for educational use with young audiences and grounded in established AD standards and research. Teachers are encouraged to consult the full framework document when composing their ADs; this section offers an orientation to its underlying principles.

Knowing Your Audience:

The starting point for any AD is a clear sense of who it is for. When writing for students, both language and description length should be calibrated to their developmental stage and prior knowledge. A useful question: would a student in the classroom understand every word in this description without needing to look anything up? If not, simplification or brief explanation is needed.

Knowing Your Audience: What to Describe and How: Effective AD is purposeful rather than exhaustive: the goal is not to name every element in the image but to convey the information most important for understanding. Several principles guide this work:

- Identifying the resource type first - whether photograph, diagram, illustration, map or slide - orients the listener before any detail is introduced.
- Key informational questions shape effective description: who is shown, what is happening, where and when the scene takes place, and how elements are arranged or related.
- A consistent spatial order – typically from top to bottom and left to right – provides listeners with a reliable mental framework where the image allows.
- The most representative visual information carries core meaning within the educational context and merits focus.
- Colour and tone convey meaning where relevant. Rather than simply noting “blue”, a more useful description might specify “a pale, faded blue that suggests age or distance.”
- All text present in the image – labels, captions, headings, annotations – warrants transcription and inclusion in the AD.

Neutrality is fundamental. Audio descriptions should convey what is present, not the describer's interpretation. Opinions, evaluations, and interpretations belong elsewhere. An AD describing a scientific diagram as “complicated” introduces the teacher's viewpoint into what should be an objective account. Learners deserve the opportunity to form their own responses.

Language: The language of an AD is as important as its content. The framework sets out clear linguistic recommendations:

- Simple, direct sentences in present tense carry single pieces of information. Lengthy clauses slow comprehension in an audio context.
- Analogies and comparisons drawn from learners' everyday experience aid genuine comprehension – for instance, “the island is roughly the size of a football pitch” or “the shape of the cell resembles a fried egg.”
- Vocabulary variation within a description maintains attention and prevents monotony, provided this does not introduce ambiguity.
- Technical terminology appears only when learners are likely to be familiar with it. If a specialist term proves unavoidable, a brief explanation within the description itself supports comprehension.

Voice: Where AD is delivered aurally – in video or audio resources – the voice narrating the description plays a significant role in reception. The framework recommends a human voice with expressive, modulated delivery, suited to the nature of the image and the age of the audience. A warm, conversational tone is generally more engaging than a flat, robotic one. Where resources permit, engaging a professional narrator is advisable. For written AD (such as alt-text in digital documents), voice is less relevant.

Applying the Framework: When reviewing materials, a useful question surfaces for each image: “If a learner could not see this, what would they miss?” The answer determines both whether AD is needed and how detailed it should be. Not all images require the same level of description; understanding this distinction conserves time and effort.

A decorative image carrying no informational value – a generic background texture, for instance – may need only a brief note or none at all. A diagram showing the stages of cell division, by contrast, is central to the learning objective and demands thorough, carefully sequenced AD.

Producing high-quality audio descriptions is a skill that develops with practice. Uncertainty about what to include and what to leave out – or concern that descriptions are either too brief or overly exhaustive – is natural for those new to AD. The framework is designed precisely to guide these decisions. Starting with one or two key images from an existing resource, applying the framework methodically, and seeking feedback – where possible from someone with a visual impairment or accessibility experience – yields growth. The effort invested in describing an image carefully is, for learners, not a minor detail but a significant act of inclusion.

Examples:

To illustrate how the EQui-T Framework can be applied in real educational contexts, the following image presents two examples of audio descriptions drawn from OER. These examples demonstrate how descriptions can be adapted to the learning objective, the type of visual material, and the age of the intended audience.



White poplar AD (Science, 2nd grade)	Iberian warrior (History, 9th grade)
	
<p>The image is a black-and-white illustration of a white poplar tree. The tree stands upright with a tall, straight trunk that widens slightly at the base. From the upper half of the trunk, many branches spread outward and upward, forming a broad, rounded crown filled with dense, small leaves. The foliage creates a textured canopy that extends wider than the trunk is tall. The ground beneath the tree is lightly sketched, suggesting grass or soil, while the background remains mostly blank.</p>	<p>This relief shows a young Iberian warrior in profile facing left. He wears a helmet with a crest of bristles or horsehair on the right side and a fitted leather cuirass secured with a wide belt. He carries a large oval shield in his left hand and holds a falcata, a curved-bladed sword, in his right hand, of which only the hilt and the beginning of the blade are visible. All of this equipment is typically Iberian.</p>

Figure 3.4: Two examples of audio descriptions of static images. Source of the images: Poplar tree. CC0. Relief: By Miguel Hermoso. Creative Commons BY SA 4.0.

2. Audio Description of Moving Images

Audio Description of moving images or dynamic visuals – whether presented as audiovisual resources or video-based instructional materials – is one of the fundamental pillars for ensuring that OER are truly inclusive and accessible for blind and partially sighted learners. AD expands access to audiovisual content by providing an additional narration that conveys the essential visual elements that the audience cannot fully perceive. Far from being a simple verbal reading of what appears on the screen, AD involves an analytical, pedagogical, and narrative process that must integrate linguistic, sensory, cognitive, and emotional criteria to ensure that the information conveyed is clear, meaningful, and appropriate for the learners’ developmental stage.

In the OER context, importance increases because these resources are created for a wide and diverse audience, with different ages, educational levels, and specific needs. Appropriate AD enables students with visual impairments to participate under conditions similar to their peers, promoting equity in learning and eliminating barriers that might otherwise restrict access to key educational content. To achieve this, it is essential to address multiple dimensions, ranging from language use to the treatment of emotions, pacing and timing, and the clarity with which key visual elements relevant to comprehension are identified.

Language and Developmental Appropriatenes: A core principle of audio description (AD) for dynamic images – reinforced by ISO/IEC TS 20071-21 and UNE 153020:2005 – is the use of simple, direct, age-appropriate language. Guidelines recommend prioritising clarity over stylistic complexity, avoiding technical jargon and dense metaphors. When AD targets children, tone also matters: a warm, engaging style supports attention and comprehension.

For instance, in a children’s OER about animals, a giraffe drinking could be described as: “The tall giraffe lowers its long neck to drink from the lake.” By contrast, “The giraffe performs a complex biomechanical manoeuvre...” is needlessly technical and unsuitable for young audiences.

Focusing on Key Visual Elements: Effective AD is selective. Rather than describing everything, it should prioritise information essential to understanding the scene and meeting learning objectives: main actions, facial expressions, spatial/temporal shifts, relevant movement, salient colours and key objects.

In a science video, “Lucía drops a fizzy tablet into a glass of water. Her eyes widen as bubbles rise” conveys both the action and the observable reaction. A vague description such as “Lucía does an experiment” omits critical cues for comprehension.

Pacing, Pauses and Cognitive Processing: Timing strongly affects accessibility. AD that is too fast can overload listeners; AD that is too slow can fall out of sync with the video. Guidelines therefore recommend distributing information across natural pauses and avoiding long clusters of details, especially for younger learners.

For example: “The boy opens the box. (Pause.) Inside is a colourful puzzle.” A rushed version (“...opens the box and finds a puzzle and smiles and...”) reduces intelligibility and processing time.

Inclusion of Sensory Descriptions: Where appropriate, brief sensory cues can enrich understanding and support mental imagery. References to sound, texture, or other non-visual information can complement what is shown on screen.

In a nature sequence, “Now you hear the river murmuring as leaves rustle” provides the context that “A forest appears” does not.

Emotions, Gestures, and Body Language: In educational settings, emotions and gestures often signal intention, encouragement, or feedback. AD should describe visible expressions and body language clearly, using straightforward emotional vocabulary and avoiding speculative interpretation.

For example: “The teacher smiles as she shows the drawing” is preferable to interpretive phrasing such as “She seems satisfied but slightly indifferent,” which introduces ambiguity and exceeds what is visually verifiable.

Description of On-screen Text, Symbols, and Graphic Elements: When text, symbols, or graphics are instructionally important, they should be verbalised. This is especially relevant in STEM and history materials, where meaning may depend on labels, equations, or keywords.

Thus, if a slide reads “Water is essential for life,” the AD should read it aloud; saying only “There is text on screen” is insufficient.

Scene Transitions and Narrative Coherence: To maintain continuity, AD should mark shifts in place, time, or setting with concise transition cues (e.g., “Now we are...,” “Later...,” “The scene shifts to...”). These signals help children follow the storyline or sequence of steps.

Example: “Now the scene shifts to the schoolyard. You can hear children playing.”

Adaptability, Personalisation, and Diverse Abilities: Because OER audiences vary in age and ability, AD should be adaptable in length, vocabulary, and detail. A version for younger children may focus on basic actions and simple emotions; an older group may benefit from additional context or subject-specific information. Guidelines also caution against using automatically generated AD without expert review, particularly by professionals and users with visual impairments.

3.3.2 Accessible OER for Deaf and Hard of Hearing Learners

Subtitling for deaf and hard of hearing learners

For deaf and hard of hearing learners (DHH), video is one of the most common formats in modern OER – and one of the most exclusionary if produced without adequate accessibility features. Subtitles address this directly. By converting speech and sound into synchronised written text, they allow DHH students to access the same information as their hearing peers, at the same time and within the same resource. Subtitles are not a nice-to-have feature in inclusive education; they are a necessity.

Beyond DHH learners, subtitles also benefit students who are watching in noisy environments, those learning through a second language, and learners who find it easier to process information when reading alongside listening. As the EQuiT Framework notes, individualisation – the ability for learners to choose whether to enable or disable captions according to their needs – is a hallmark of accessible OER design. Well-made subtitles extend the reach of a resource without diminishing its value for any learner.

Not all subtitles serve the same purpose, and this distinction is critical for inclusive OER design. Standard subtitles – typically used to render speech in a foreign language – assume the viewer can hear background sound, music, and environmental audio. Subtitles for the deaf and hard of hearing (SDH), by contrast, are specifically designed for viewers who cannot access the audio track at all. SDH subtitles do not merely transcribe speech: they also convey non-verbal auditory information that is significant for understanding the content.

Core principles of good subtitling:

Subtitling for deaf and hard of hearing learners: For deaf and hard of hearing learners (DHH), video is one of the most common formats in modern OER – and one of the most exclusionary if produced without adequate accessibility features. Subtitles address this directly. By converting speech and sound into synchronised written text, they allow DHH students to access the same information as their hearing peers, at the same time and within the same resource. Subtitles are not a nice-to-have feature in inclusive education; they are a necessity.

Accuracy and Completeness: The most important requirement for SDH subtitles is that they faithfully represent what is said and heard. The EQuiT Framework is unambiguous on this point: subtitles should be as literal as possible, preserving the original content without unnecessary simplification, neutralisation, or reduction. Where space-time constraints genuinely demand condensation, carefully considered adaptation techniques may be applied – but this should be a last resort rather than a default. Spelling and grammar must follow the conventions of the language used, and any on-screen text that is relevant to the content should be transcribed alongside the spoken dialogue.

3

Synchronisation: Subtitles must be timed to align with the speech and sound they represent. The framework specifies that each subtitle should appear and disappear in sync with the corresponding lip movements and speech. In practice, this means aiming for a reading speed that allows comfortable reading without rushing: the recommended maximum is 12 characters per second for general audiences, and platform norms for secondary school students suggest that a somewhat slower pace is appropriate. Each subtitle should occupy no more than two lines, or three in exceptional circumstances for educational material.

Readability: Font, Contrast, and Line Length: Legibility is non-negotiable. The framework recommends a clear sans-serif font – such as Arial – scaled proportionally to the video resolution. Colour and contrast are critical: high contrast is best achieved with white text on a dark background or yellow text on black, as these combinations minimize visual fatigue. If subtitle text risks clashing with a light or dynamic background, a semi-transparent coloured box behind the text can preserve readability.

For line length, 42 characters is the recommended maximum, aligning with both the Spanish UNE 153010 standard and practices of major streaming platforms. Subtitles should default to the bottom of the screen, though they may be repositioned upward if on-screen content would otherwise be obscured.

Avoid complex punctuation, such as semicolons or combined question and exclamation marks. Italics have a specific role – denoting voice-overs, off-screen speakers, electronic media voices or song lyrics – and should not be used for general emphasis.

Speaker Identification: When multiple speakers are present, viewers need clear cues to identify who is speaking. The framework suggests using a dash followed by a new line to separate speakers within a single subtitle, ensuring no more than one speaker per line. For recurring speakers, colour-coding can be applied, though white text remains the cleaner and more widely accessible choice. Off-screen narrators or voiceovers should be consistently marked with italics or a label (e.g., [NARRATOR]).

Contextual paralinguistic details – such as a character shouting, speaking with a specific accent, or using a second language – should be included in parentheses before the relevant text.

Sound Effects and Music: This aspect of subtitling is often overlooked in educational resources, despite its critical importance for deaf learners. Relevant sound effects – such as a telephone ringing in a scene, a fire alarm in a safety demonstration, or the sounds of a historical battle in a history lesson – must be described in square brackets, with an initial capital letter, at the moment they occur. Examples include [Doorbell rings] or [Applause].

Similarly, music that enhances the content – whether through atmosphere or meaningful lyrics – should be indicated, with descriptions like [Tense orchestral music] or [Upbeat pop song fades in]. Purely decorative background music that adds no informational value may be omitted.

Practical Guidance: Tools and Workflows for Teachers: Adding subtitles to video OER does not require specialist technical skills, and a range of free tools are available to support teachers. For videos hosted on YouTube, the simplest method is to use YouTube’s built-in caption editor, which enables creators to upload subtitle files directly to their videos. For videos hosted on other platforms, Amara (amara.org) is a free, browser-based platform that allows users to create, edit, and synchronise subtitles for YouTube and Vimeo content without installing any software. Amara is widely used in educational contexts precisely because it requires no specialist knowledge and supports export in standard subtitle formats (SRT and .VTT).

Teachers who prefer offline tools can use Subtitle Edit, a free, open-source application designed for Windows that offers finer control over subtitle timing, reading speed calculation, and format conversion. For simple text-based OER or presentations with voiceover, creating a plain-text transcript as an accompanying document is a valuable first step – even before producing a fully synchronised subtitle file.

The Limitations of Auto-Generated Captions: Automatic captioning, offered by platforms including YouTube, Microsoft Stream, and various AI-powered tools, has improved substantially in recent years and can serve as a helpful starting point. However, the EQuiT Framework clearly warns against using auto-generated subtitles as final content without careful human review and correction.

Auto-captions routinely misinterpret proper nouns and subject-specific terminology – precisely the language that matters most in educational OER. They also usually fail to describe sound effects and music, do not identify speakers, and may produce text that is poorly segmented and hard to follow in time with the audio.

Quality Review: Once subtitles have been created or corrected, the framework advises having someone with relevant expertise review the result before publication. Where feasible, this reviewer should include a person with hearing impairments, as their firsthand experience with subtitled content provides the most reliable measure of quality.

At minimum, teachers should watch their video with subtitles enabled to confirm that every spoken word and relevant sound is accurately represented and that the timing allows for comfortable reading throughout.

3

Examples of Good Practice in OER: Several widely used platforms demonstrate strong subtitling practices and are worth using as reference models. The Khan Academy (khanacademy.org) provides human-reviewed closed captions across its extensive library of educational videos, covering mathematics, science, and humanities content for secondary-level learners.

The BBC Teach platform (bbc.co.uk/teach) follows the BBC's own detailed subtitling guidelines, which closely align with the EQuI-T Framework's recommendations, for its publicly available educational video content.

TED-Ed (ed.ted.com) offers transcripts and subtitles for all its lessons and allows community members to translate captions into other languages, making it especially relevant for multilingual OER contexts.

These examples share a key principle: subtitles are treated as a fundamental part of production, not an afterthought. This aligns with the ethos the EQuI-T Framework promotes – planning for accessibility from the start, rather than retrofitting it later.

3.3.3 Sign language interpreting in OER

For many deaf learners, subtitles alone do not provide full linguistic access to educational content. This is because sign languages – British Sign Language (BSL), American Sign Language (ASL), Spanish Sign Language (LSE), and the many other national and regional signed languages – are fully independent natural languages, with their own grammar, syntax, and lexicon. They are not derived from the spoken languages they coexist with, and knowing a signed language does not automatically mean fluency in the written form of a spoken language.

For a significant number of deaf students, their signed language is their first language, and written text – including subtitles – is a second-language medium. For some learners, this means that subtitles might be accessible in format, yet still linguistically challenging.

Providing content in sign language acknowledges and respects this reality. The EQuI-T Framework, supported by accessibility research and the W3C's Web Content Accessibility Guidelines (WCAG), recommends making key information, ideas, and processes in educational OER available in sign language where possible. This is not a substitute for subtitles but an additional, complementary form of access.

Core principles for Integrating Sign Language into OER

Visibility and Framing:

The EQuI-T Framework sets out clear visual requirements for sign language content. The interpreter or signer must be fully visible and legible, with medium or medium-long framing – typically from the waist up – so that both manual signs and non-manual features (facial expressions and mouth patterns, which carry grammatical meaning in signed languages) can be read clearly.

The signer's clothing should contrast with their skin tone and have a plain texture, avoiding patterns or decorative elements that could distract from the signs. Lighting must be even and adequate, with no harsh shadows on the face or hands. Where a chroma key (green screen) background is used, the interpreter must stand out clearly against the chosen background colour.

Synchronisation and Placement: The sign language video must align precisely with the audio or spoken content of the OER. The Framework emphasises that any delay between the audio and signing creates a disorienting experience for users relying on both channels.

If subtitles are also included, the placement of the sign language interpreter must be carefully planned to prevent overlap. Typically, the interpreter is positioned in a corner of the screen, with subtitles adjusted accordingly.

The framework also notes that when fingerspelling (the manual spelling of words not in the sign lexicon) is used, the written form of the spelt word should appear in the subtitle simultaneously.

Language Choice and Audience: Sign language is not universal. A teacher producing OER for students in one national context should use the sign language of that country's deaf community as the primary medium. Where resources are intended for multiple audiences or international distribution, the use of international signs as a supplementary option is worth considering.

The EQui-T Framework also notes that if the source material has not been adapted for the intended audience – for instance, if the language level is too advanced – a signed version that is adapted, not merely translated, should be provided.

Practical Options for Teachers

Producing sign language content from scratch requires access to a qualified interpreter or deaf signer, and is likely beyond the capacity of individual teachers working alone. However, there are several practical, scalable approaches to make sign language access achievable within typical secondary school contexts.

The most sustainable option is to collaborate with a specialist: a qualified BSL or LSE interpreter (or equivalent in the relevant national context), or – as the EQui-T Framework explicitly recommends – a deaf translator with expertise both in the subject matter and the signed language. This collaboration not only produces higher-quality content but also ensures that the cultural and linguistic norms of the deaf community are respected.

Where institutional budgets allow, even a short signed summary of key concepts within a video or lesson resource is far more valuable than no sign language provision at all.

For teachers with more limited resources, several other options are available.

- Sign language avatar technology – digital animated signers driven by text or notation input – is an emerging option offered by platforms such as SignAll and various European accessibility projects. However, quality varies, and human review by a deaf signer remains essential.
- Another practical approach is to link directly from OER to externally produced signed versions of content: for example, signed glossaries or signed explanations of concepts created by deaf education organisations. The World Around You platform provides video storybooks in multiple signed languages and may serve as a supplement for language and literacy OER.

Examples of Good Practice:

The Gallaudet University Open Course Library (clerccenter.gallaudet.edu) produces OER for deaf education that integrates American Sign Language throughout, modelling the principle of co-creation with the deaf community.

In the European context, national public broadcasting organisations – including the BBC, which produces signed versions of educational and news content – demonstrate how sign language can be embedded as a standard element of accessible content production rather than an afterthought. For secondary school teachers seeking a ready-made reference, ASLCORE (aslcore.org) provides open-access signed vocabulary and explanations for academic subject areas, produced entirely by deaf content experts.

3.4 Cognitive Accessibility

3.4.1 Accessible Communication. Easy Language and Clear Writing

Cognitive diversity is a reality in every classroom. Some students experience reading and comprehension difficulties due to intellectual disabilities or neurodevelopmental disorders, while others have language processing disorders. Contextual factors also play a significant role. Learning in a language other than one's mother tongue or coming from a low socioeconomic background can substantially affect reading comprehension. An educational resource is cognitively accessible when it accommodates these varied learning profiles, ensuring that all students can access and understand the material.

“Easy Language” is a simplified, structured approach to language use that prioritizes clarity and understanding through short sentences, simple vocabulary, and logical organization (AENOR, 2018). While research continues to refine which guidelines are most effective across different languages and contexts – and some are language dependent (e.g., the use of the mediopunkt in German for compound words) –, the recommendations below represent widely adopted standards based on established practice in the field. This section offers practical guidance for recognizing high-quality accessible OER in Easy Language or adapting your own resources to serve students with different learning needs. The recommendations are organised into four key areas: vocabulary, grammar and syntax, design, and visual support.

Recommendations of cognitive accessibility

Vocabulary:

- Using simple and consistent vocabulary. Selecting frequently used words and using the same term repeatedly when discussing the same concept. This consistency helps students build understanding.
- Explaining difficult words is essential when specialised or technical terms cannot be avoided. The framework recommends two approaches: placing definitions in a glossary at the document's beginning or end, or using glosses – brief explanations embedded directly beside the term in the text. In both cases, the term should be bolded for emphasis.
- Managing abbreviations and acronyms requires minimising their use and always spelling out the full term on first mention, followed by the abbreviation in parentheses.

Grammar and Syntax:

- Writing short, simple sentences. Combining multiple ideas in a single sentence increases complexity and should be avoided.
- Organizing ideas into distinct paragraphs involves grouping related ideas without overcrowding. Additionally, splitting paragraphs across pages disrupts comprehension flow and should be prevented.
- Using affirmative phrasing and simple verb tenses means opting for present tense when possible and constructing sentences positively (e.g., “Include images” rather than “Do not exclude images”).
- Using active voice makes language more direct and easier to follow. Sentences with clear agents (e.g., “The teacher explains” rather than “The concept is explained”) support better comprehension.

Design and Layout:

- Ensuring sufficient contrast requires using flat background colours with strong text contrast and avoiding red-green combinations, which present challenges for colour-blind readers. A contrast calculator tool or software's accessibility settings can verify adequacy.
- Choosing appropriate fonts involves selecting sans-serif typefaces (Arial, Calibri, Verdana) for easier readability. Font sizes between 12–16 points work well for printed or online documents, with adjustments as needed for presentations. Uppercase letters should not be used for emphasis; bold formatting works better for key terms and glossed words. In languages with uppercase and lowercase, capitals should appear only at sentence beginnings, titles, proper names, and positions after periods.
- Aligning text appropriately calls for left justification in Latin alphabet languages and full justification in character-based languages.
- Optimizing line spacing involves maintaining a minimum of 1.5 spacing, adjusted according to font size and whether the text is printed or digital.
- Avoiding hyphenation at line breaks preserves reading flow by preventing word breaks with hyphens at line endings.
- Numbering pages clearly requires using font sizes noticeably larger than body text, making page references easy to locate.
- Structuring content visually makes content organization clear at every level. Up to three hierarchical heading levels should organize information, with at least one heading per page, adequate paragraph spacing, and bullet points for lists within paragraphs.

Visual Support and Images:

- Using images purposefully involves including photographs, drawings, and illustrations only when they complement and clarify text. Images enhance understanding of surrounding content rather than serving merely decorative functions.
- Placing images strategically positions them near relevant text without disrupting readability or flow.
- Maintaining visual consistency reinforces learning by representing each concept consistently throughout the document. The same image should appear for the same idea, reducing cognitive load.
- Prioritising image quality ensures clarity and engagement through high-resolution, coloured images whenever possible.
- Providing alternative text supports students who are blind or have low vision by including alt text in digital documents.
- Considering additional visual supports involves consulting resources on visual aids and pictograms for students with severe communication or motor difficulties, ensuring comprehensive accessibility strategies are in place.

Learning from Validated Materials:

Freely available adapted materials can serve as useful starting points for teachers working in English, German, or Spanish. Plena Inclusión, a network of Spanish organizations advocating for the rights of people with intellectual and developmental disabilities, maintains a library of approximately 1,000 documents adapted to Easy Language national or international standards (2026).

Many of these documents display the “easy-read logo” – a symbol featuring a smiling figure reading a book with a thumbs-up. This logo indicates that a document follows the Information for All standard (2010), developed by Inclusion Europe, a European organization of self-advocates and family members of people with intellectual disabilities. Documents bearing this logo have been formally validated, meaning that at least one person with reading comprehension difficulties (though validation groups typically include two to five people) has reviewed the text to assess its clarity and usability. These reviewers provide feedback to the document creator, often leading to a second round of revision before final approval.

This validation process demonstrates that accessibility requires both adherence to established guidelines and input from people with lived experience of reading difficulties. Creating accessible materials often involves trial and error. It is worth noting that not all documents in the Plena Inclusion library follow every guideline perfectly, yet they have been approved by people with genuine comprehension needs. This reflects an important principle: accessibility is a collaborative, evolving process rather than a matter of strict rule-following.

Easy Language as a Scaffold, not a Ceiling

Specialists view Easy Language not as a rigid formula but as a spectrum with different levels of complexity. In educational contexts especially, it should be understood as a “ladder to knowledge” (Plena Inclusión España & Universidad Autónoma de Madrid, 2019) rather than a fixed standard. Guidelines about limiting abstract concepts and terminology are not intended to exclude students from engaging with complex ideas – such as scientific concepts – but rather to provide progressive scaffolding that enables them to build understanding gradually. This approach prevents students from becoming overwhelmed by dense syntax and abstract language, allowing them to progress toward increasingly sophisticated subject matter.

3.4.2 Pictograms for Learners with Special Needs in Educational Support

The use of pictograms in creating accessible OER should not be seen merely as the addition of isolated visual aids, but as a strategic approach to transforming how content is presented – ensuring it is understandable to all students, especially those with special needs.

In practice, this means educators should not only grasp the theoretical principles behind pictogram use but also apply them effectively in real classroom settings. This requires tailored strategies that align with the unique needs of their pupils.

Within the framework of Universal Design for Learning (UDL), pictograms align with the principle of multiple means of representation. This principle emphasises offering alternatives to verbal language to enhance comprehension of information (CAST, 2018). Evidence from real-world educational settings shows how this approach can be implemented. For instance, complex curriculum content can be adapted into visually accessible formats. As Redondo Prieto (2020) illustrates, social studies topics – such as the French Revolution or the Industrial Revolution – can be conveyed through sequences of pictograms. These sequences either replace or complement written text, making the material more accessible for students with special needs.



Figure 3.5: Sequence of pictograms French Revolution (in Spanish). Sources of the images: Crown and Hungry: Mulberry Symbols. By Steve Lee. Town: PiCom Curriculum Symbols. By Sensory App House Ltd. Fight: OpenMoji Project. Creative Commons BY SA 4.0.

This adaptation helps reduce learners' cognitive load, allowing them to focus on grasping the content rather than deciphering the language. Moreover, real-life classroom experiences show that this type of representation enhances understanding of abstract concepts by grounding them in tangible visuals.

Pictograms also serve another purpose: structuring tasks and guiding students' actions. For example, they can simplify complex activities by replacing lengthy verbal instructions with step-by-step visual sequences. Instead of explaining tasks verbally, teachers can use a visual guide to indicate actions like "read", "underline", "answer", and "hand in".

This method of sequencing extends beyond specific tasks. It also plays a key role in organising the learning environment and supporting behaviour regulation. By using sequences to outline the day's activities, pupils can anticipate what will happen, reducing uncertainty and fostering self-regulation (Mesibov & Howley, 2010). This approach has proven especially beneficial for students with autism spectrum disorder (ASD), as it helps them anticipate tasks and alleviates anxiety.



Figure 3.6: Agenda Logopeda (speech therapy app interface). Source: Own work using TD Snap (Tobii Dynavox).

Another key role of pictograms in education is supporting both the expression and assessment of learning. While they facilitate comprehension, pictograms also offer accessible ways for students – particularly those with special needs – to articulate what they have learned. For example, learning journals or portfolios that incorporate pictograms enable students to convey emotions, reflect on their progress, and self-assess without relying solely on written language.

Pictograms can also enhance formative assessment, especially when embedded in digital tools. In quiz-based activities (e.g., Kahoot), reducing the number of answer options and integrating pictograms can:

- Simplify question comprehension.
- Support learners with reading difficulties.
- Encourage more equitable participation.

Such adaptations align with Universal Design for Learning (UDL) principles (CAST, 2018), as they remove access barriers without compromising learning objectives.

However, effective use requires thoughtful adaptation. Teachers should consider that:

- Not all concepts can be represented by a single pictogram.
- Abstract ideas (e.g., revolution, respect) often require combinations of symbols (e.g., change + people + conflict).
- Meaning should be developed progressively through concrete and observable elements.

Learning is strengthened when verbal and visual information are combined. Therefore, pictogram use should be seen as an ongoing, adaptable process, tailored to learners, context, and objectives. There is no single “correct” approach; instead, effective practice depends on continuous evaluation and reflective teaching (Redondo Prieto, 2020).

In this context, designing accessible resources with pictograms goes beyond technical implementation. It involves leveraging their pedagogical potential across multiple functions, including:

- Representing content
- Structuring tasks
- Facilitating expression
- Organising learning environments

As such, pictograms play a central role in promoting cognitive accessibility and inclusive education.

The EQui-T Framework further underscores the importance of visual supports (pictograms, illustrations, and graphics) in reducing language demands and supporting memory and orientation. It outlines key principles for their effective use:

- Age appropriateness: Avoid overly simplistic imagery for older learners.
- Cultural relevance: Adapt symbols to the learners’ context.
- Accessibility: Ensure adequate size, clarity, and contrast.
- Consistency: Use the same pictogram for the same concept throughout.
- Selectivity: Represent key ideas rather than translating text word-for-word.
- Explicit teaching: Introduce and explain pictograms before expecting independent use.

Overall, pictograms are most effective when used strategically, consistently, and with clear pedagogical intent, ensuring they genuinely support diverse learners rather than introducing unnecessary complexity.

3



3.5 Final remarks

Accessible OER can transform learning environments. They are a powerful way of making learning more inclusive and equitable for all students. As this chapter has shown, accessibility involves many interconnected dimensions, from technological and sensory accessibility to cognitive accessibility and clear communication. Adding subtitles, writing in plain language, providing alternative text, improving navigation, and incorporating audio descriptions and visual supports can significantly reduce barriers to participating and understanding what we need to teach our students.

The EQuI-T Framework offers teachers a practical and flexible guide to reflect on these dimensions when creating or adapting OER without promoting a rigid or perfectionist approach. Accessibility is a process of reflection and improvement, shaped by the real needs of learners and their educational context. Teachers do not need to transform all their materials at once; a few achievable changes can have substantial impact.

Accessible OER can benefit everyone. Learners with disabilities or specific educational needs gain greater autonomy and participation, while all students benefit from clearer communication and multimodal learning opportunities – increasingly essential in today's world. By integrating accessibility into everyday teaching practice, educators contribute to classrooms where diversity is treated as a natural and valuable part of learning. Inclusive education is built through many small, thoughtful choices, and accessible OER are one of the most effective tools teachers have to make that vision a reality.



3.6 Summary

In a nutshell: Making Your OER More Accessible and Engaging

- Remove barriers. Make sure every student can use the same resource.
- Use easy formats that you can edit, and that work on different devices.
- Keep it simple to follow: clear layout, clear headings, easy navigation.
- Make text easy to read: clear writing, good contrast, readable fonts and spacing.
- Make pictures and media usable for everyone: alt text and audio description for images, transcripts for audio, captions and audio description for video.
- Reduce cognitive load: use short sentences and, when helpful, pictograms.
- Use the EQuI-T checklist to guide you through your OER step by step!



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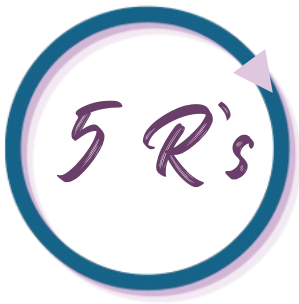
4

Open Educational Resources (OER)

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David Wiley (2014) defined five main characteristics of OER, the “5 R’s”:

- R**etain → the right to make, own, and control copies of the content
- R**euse → the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)
- R**evise → the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)
- R**emix → the right to combine the original or revised content with other open content to create something new (e.g., incorporate the content into a mashup)
- R**edistribute → the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

The 5 R’s give us a preview of what we are allowed to do with OER and the benefits that come with it. To be able to take advantage of these benefits, we need **suitable licenses**. Open licenses are a fundamental prerequisite for materials to be classified as OER.

And here is why:

Open license refers to a license that respects the intellectual property rights of the copyright owner and provides permissions granting the public the rights to access, re-use, re-purpose, adapt and redistribute educational materials.

(UNESCO, 2022, p. 5)

Q The question is: if learning materials are available free of charge, aren't they automatically "Open Educational Resources"?

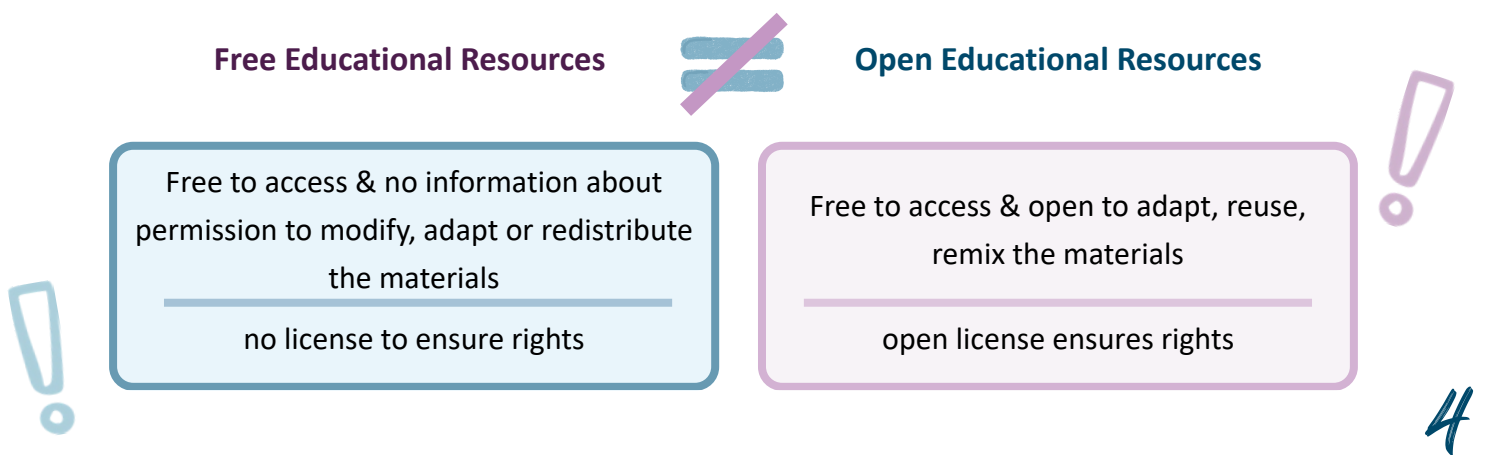
A And the answer is: no!

In fact, there is a clear difference between Free and Open Educational Resources:

Free Educational Resources are available free of charge, but this does not necessarily mean that users are permitted to modify, adapt, or reuse the materials.

For example: PDF files can often be read for free, but cannot be modified or redistributed.

Open Educational Resources are also available free of charge, but they come with a license that explicitly states what you are permitted to do with the materials: use, adapt, redistribute and modify them.



As mentioned above, appropriate licenses are a fundamental prerequisite for being able to take full advantage of open source materials.

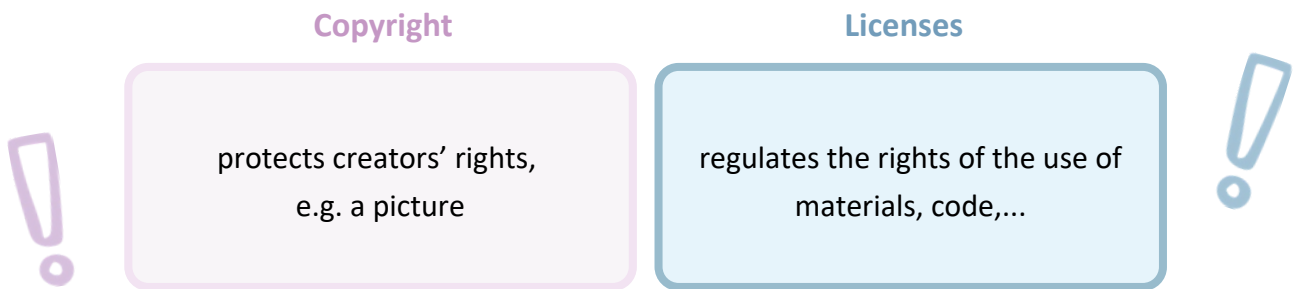
OER are materials that are reside in the public domain or under an open license that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others.

Let's have a closer look at those licenses and why having licenses is so important.

For educators, certain measures can be beneficial when sharing OER. One of these is to publish your OER under clear and transparent conditions for the use, adaptation, and redistribution of materials, code, and other resources through others.

Licenses tell other educators exactly what they are allowed to do with your self-created and openly published materials.

It's important to distinguish between licenses and copyright:



There are various open licenses for code, software, multimedia material, or OER. The difference is that they are not equally open although they share the same goal to promote innovation, collaboration, and free access to resources.

In the context of Open Source licenses, there are two major categories: Copyleft licenses and Permissive licenses.


Copyleft licenses require that modified or derivative works be released under the same copyleft license as the original work. This ensures that the original work remains open-source.


Permissive licenses are more flexible, and allow licensed code to be used in proprietary projects as well.

4.2 Examples of Open Licenses

Let's go through the most common open license possibilities.

4.2.1 Creative commons (CC licenses)

 ...is an international non-profit organisation, founded in 2001, that empowers people to grow and sustain the thriving commons of shared knowledge and culture we need to address the world's most pressing challenges and create a brighter future for all.

 ...is most widely used for texts, images, videos, educational content,...

For example: Wikipedia articles are published under a cc license. You find the information on the license at the bottom of a Wikipedia text.


 ...offers 6 key licenses with different levels of openness. The openness of a license can be deduced from the symbols depicted in the license badge:

Figure 4.1: "CC Icon" by Creative Commons is licensed under CC BY 4.0 international



You can find all Creative Commons Licenses under the following link: <https://creativecommons.org/share-your-work/licenses/>

On the right, you find the Creative Commons Spectrum from the least (bottom) to the most open (top) licenses.

This shows that not all licenses are considered open. For example, if licenses include the “No Derivatives”-badge (ND) there are no adaptations allowed. In this case, they are rather considered closed than open. On the opposite side of the spectrum, a CC0 license means that others can freely build upon, enhance or reuse the work regardless of the purpose. The work can be used without restrictions under copyright or database law.

For OER, the most important licenses besides the Public Domain (on top) or the CC0 license are CC-BY and CC-BY-SA. But also CC-BY-NC and CC-BY-NC-SA are often considered suitable for OER.

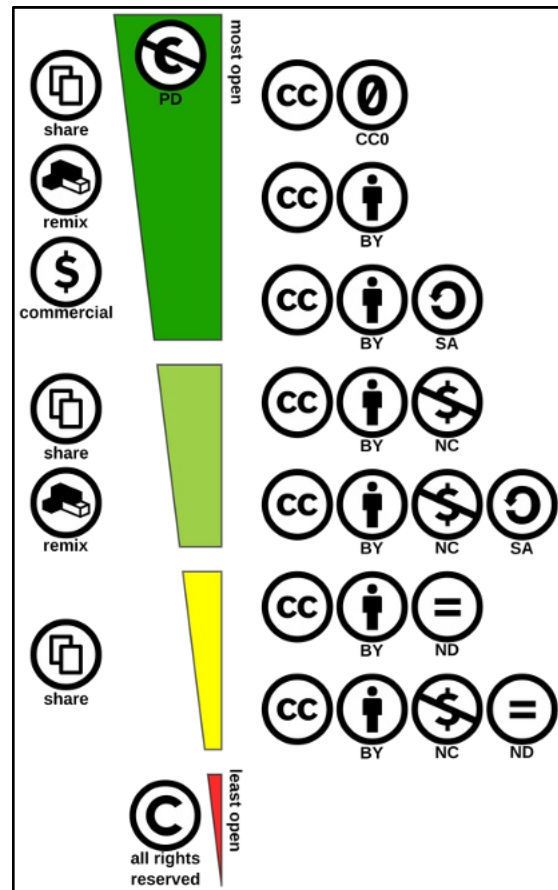






Figure 4.2: “Creative Commons License Spectrum” by Shaddim is licensed under CC BY 4.0

4



Figure 4.3: “Creative commons licenses”, each by Creative Commons are licensed under CC BY 4.0 international

Here is what these most common licenses mean:

- 
BY: Attribution
➔
Credit must be given to the creator.
- 
SA: Share Alike
➔
Adaptations must be shared under the same conditions.
- 
NC: Non-Commercial
➔
Only non-commercial uses of the work are permitted.
- 
ND: No Derivates
➔
No derivates or adaptations of the work are permitted.

Figures 4.4 - 4.7: “CC Icons” by Creative Commons is licensed under CC BY 4.0 international

To support the decision for an appropriate license particular materials and requirements, Creative Commons provides a tool, the license chooser: <https://creativecommons.org/chooser/>
 When following the steps the recommended choice is given:

1 Do you know which license you need?

Yes
 No

2 Require attribution for your work?

Yes
 No

3 Allow others to use your work commercially?

Yes
 No

Recommended Choice

CC BY-SA 4.0
Creative Commons Attribution-ShareAlike 4.0 International

This license requires that reusers give credit to the creator. It allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, even for commercial purposes. If others remix, adapt, or build upon the material, they must license the modified material under identical terms.

Figure 4.8: License chooser (Creative Commons, n.d.)



For more background information: <https://creativecommons.org/>

4.2.2 Wikimedia Commons Licenses

... is a respository of freely usable media (images, videos, audio files,...).

... is linked to Wikipedia and other Wikimedia projects.

... is mostly based omn CC licenses or Public Domain.

... is existing since 7 September 2024 and offers more than 110 million media.



Figure 4.9: "[Wikimedia commons icon](#)" is licensed under CC BY-SA-NC

(Wikimedia Meta-Wiki, 2025)



For more background information: https://de.wikipedia.org/wiki/Wikimedia_Commons

4.2.3 GNU Licenses (GNU General Public License, GPL)



Figure 4.10: "A GNU Head" is licensed under GNU Free Documentation by CC BY-SA 2.0

...is primarily used for software.

...offered the first Copyleft licences → all changes need to be published under GPL which means that users are free to use, modify, and redistribute software (condition: derivatives must stay open).

...protects freedom → free access and openness of the software are protected (for example: Linux-Kernel)

...disadvantages → compatibility problems with proprietary software/code/programs, since open and non-open licenses cannot be combined (the resulting product cannot be published under two different, potentially contradicting licenses).

(Free Software Foundation, 2025)



For more background information:

<https://www.gnu.org/gnu/gnu.html.en>

Reflection box: Your personal experience with OER

- Have you ever knowingly worked with OER?
- Are the materials you work with licensed?
- Can you imagine licensing the materials you create?
Why /why not?



4

4.3 OER Movement - Aims, Activities and relevant Stakeholders

The worldwide OER movement is rooted in the human right to access high-quality education. This shift in educational practices is not just about cost saving and easy access to openly licensed content, it's about participation and co-creation.

The OER movement began in the early 2000s, particularly with the launch of the MIT OpenCourseWare (OCW) initiative in 2001, which aimed to make all MIT course materials freely available online.

In 2002, during a UNESCO Forum in Paris, the term "Open Educational Resources" was officially introduced, reflecting a shared vision of education as a global public good.

The movement was fueled by technological advances, rising educational costs, inspiration from the free software movement, and a global need for more equitable access to quality education.



The main goals of the OER movement include:

- expanding access to education globally
- supporting lifelong learning
- encouraging collaborative knowledge creation
- reducing costs in education by promoting freely available teaching and learning resources



Key activities within the OER movement are:

- developing and publishing educational materials under open licenses
- creating and maintaining platforms and repositories for sharing OER
- raising awareness and building capacity through workshops and trainings
- conducting research to evaluate the impact of OER on education systems



The relevant stakeholders involved in the OER ecosystem are:

- higher education institutions (e.g., MIT)
- international organizations (especially UNESCO and OECD),
- governments, by adopting policies that promote OER
- NGOs and foundations, such as the William and Flora Hewlett Foundation, which fund OER initiatives
- educators and learners, who both create and use OER in practice

Significant milestones include the 2001 MIT OCW announcement, the 2002 UNESCO Forum, the OECD's 2007 report Giving Knowledge for Free, and the Paris OER Declaration of 2012, where UNESCO member states formally committed to promoting OER as a tool for inclusive and equitable education.

Today, the OER movement is seen as a key driver for more inclusive, accessible, and affordable education worldwide, aiming to empower individuals and build just and knowledge-based societies.



For more background information on the history of OER:
<https://h5pstudio.ecampusontario.ca/content/4804>





4.4 The significance of OER in the Educational context

Freely accessible learning materials are part of an idea that recognises education as a fundamental right (as stated in chapter 2) and sees it as the key to individual and societal development:

- ▶ **Access to quality education worldwide:** expanding access to high quality educational materials globally, especially for underserved communities.
- ▶ **Promoting equity in education:** for students and institutions.
- ▶ **Encouraging innovation in teaching and learning:** adapting, remixing, and customizing to meet diverse learning needs.
- ▶ **Supporting lifelong learning:** resources are accessible for the learners anytime and anywhere.
- ▶ **Collaboration across borders:** enhancing collaboration and sharing across educational institutions, disciplines, and countries.

Using Open Educational Resources offers specific advantages for educators:

- ◎ **Flexibility:** Teachers can adapt materials to meet their students' needs (language, cultural context, learning level).
- ◎ **Creative freedom:** OER allow modifications, combinations, and improvements of content without legal risks.
- ◎ **Professional collaboration:** Sharing and co-creating OER fosters professional exchange and growth.
- ◎ **Time savings:** Available resources help teachers reduce time in creating new teaching materials
- ◎ **Cost savings:** Free resources help schools and teachers reduce textbook and licensing costs.
- ◎ **Keeping materials up-to-date:** Teachers can revise outdated content without waiting for new editions from publishers.
- ◎ **Support for inclusive education**

(UNESCO, 2022; Wiley & Hilton, 2018)

4



4.5 OER and Inclusive Education

Overall, OER enable teachers to better address the diverse needs of learners (e.g., different languages, disabilities, learning speeds).

In detail, OER promotes Inclusion (UNESCO, 2017) through the following possibilities:

Accessibility: OER can be designed to meet diverse accessibility needs (e.g., screen reader-compatible formats, captioned videos, alternative text for images) → This supports learners with disabilities or specific learning needs.

Adaptability: Educators can modify OER to suit different linguistic, cultural, and cognitive contexts → Materials can be translated, simplified, or culturally adjusted, enabling better inclusion of marginalized groups.

Affordability: OER are free to use and adapt, eliminating cost barriers that disproportionately affect disadvantaged students.

Diverse representation: Teachers and learners can create or adapt OER that better reflect a wide range of backgrounds, experiences, and identities → Supports culturally responsive and gender-sensitive teaching.

Flexibility in learning: OER support self-paced and differentiated learning approaches, accommodating diverse learning styles and life situations (e.g., part-time learners, refugees, remote learners).

Empowerment and participation: Learners can not only consume but actively contribute to OER creation, fostering agency and ownership in their education.

4

If we take a closer look, we see ...

...the vision of OER – openness, collaboration, and equity – naturally aligns with the principles of inclusive education. Therefore, the OER movement is seen as a key driver for more inclusive, accessible, and affordable education worldwide, aiming to empower individuals and build just and knowledge-based societies.



4.6 Conclusion - The advantages of OER in a nutshell



Figure 4.11: “We are Open Educational resources” (2026). Open Educational Resources [KI-generiertes Bild]. Erstellt mit ChatGPT/DALL-E.

- are diverse teaching and learning materials that come in different shapes (e.g. books, videos, audio files)
- are openly licensed (e.g., CC BY SA) and this ensures rights
- come with the permission to either Retain, Reuse, Revise, Remix, and/or Redistribute (5 R’s) us (UNESCO, 2019; Wiley, n.d.; Wiley & Hilton III, 2018)
- help you to save time when creating teaching materials

- provide flexibility to support inclusive teaching because you are free to modify us to meet the learners’ diverse needs
- provide access to quality education worldwide and promote equity in education
- encourage innovation in teaching and learning as well as professional collaboration across borders
- are free of cost

4.7 Summary

Open Educational Resources (also called OER) are free learning materials such as books, worksheets, images, and videos that anyone can use. OER have open licenses that allow users to download, share, adapt, and reuse them. OER make learning more flexible for teachers and learners by allowing materials to be adapted to diverse learning needs. They also encourage collaboration among teachers who can share their materials and improve resources together. By being freely available online, OER promote equal access to education and help make learning more inclusive, creative, and accessible for everyone.



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Dissemination guidelines; searching for and sharing inclusive and open educational resources

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5.1 Introduction

In this chapter we will present guidelines to support teachers when searching for, adapting and sharing inclusive and open educational resources (OER). These guidelines are a result of several efforts in the course of the EQui-T project combined with literature and knowledge from this field. We divide the process of searching for, adapting and sharing OER into two main tracks corresponding to two different roles or positions and scenarios teachers typically find themselves in: 1. searching for and evaluating OER; 2. creating and sharing OER – as shown in Figure 5.1. The guidelines as presented here are somewhat simplified to make them easier to apply. We acknowledge that the processes involved in searching for, identifying, adapting and sharing inclusive and open educational resources can be complex and iterative.

In the following sections, we briefly describe what these guidelines are, and how they have been developed, before we introduce the hands-on guidelines in section 5.2. Last, in section 5.3 we share some teacher stories to exemplify and narrate how these guidelines can be relevant for teachers' pedagogical practice - the guideline's main purpose.

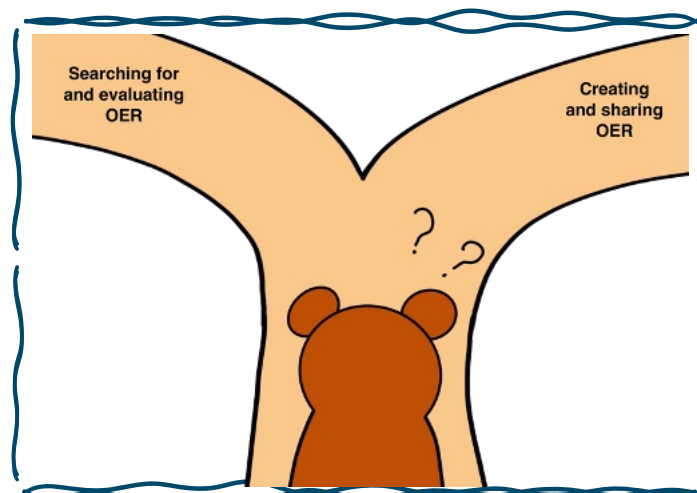


Figure 5.1. One teacher and the two pathways – i.e., Searching for and evaluating OER or Creating and sharing OER

5

5.1.1. What are these guidelines and what are they for?

We consider these guidelines to be a tool to help you and other teachers when searching for and evaluating the quality of OER, and when you create and share OER. Even though this may sound simple, there are several steps and competences involved in these aspects. The guidelines build on several knowledge domains, such as OER, inclusive education, quality evaluation, platforms/repositories, teacher knowledge, and digital literacy. Moreover, several frameworks and models within these domains are further broken down and applied where relevant to illustrate a useful and feasible guide when dealing with a highly interdisciplinary area as shown in Figure 5.2. Some of these frameworks and models include the technological, pedagogical and content knowledge (TPACK; Koehler et al., 2013), Universal design for learning (UDL; Meyer & Rose, 2024), ICAP (Chi & Wylie, 2014), and AI literacy (Miao & Cukurova, 2024; Miao et al., 2024).

For instance, a teacher needs to know how and where to search for OER, how to evaluate the quality of the resource including its relevance to the teacher and their student groups' needs, to what extent the resource is in fact "open", and to what extent it is "inclusive". Moreover, while some teachers hesitate from sharing their own educational resources and materials, which could potentially be of great value for other teachers, others might lack the necessary digital literacy to share and contribute to the community of practice. Therefore, these guidelines will support the teachers to develop their knowledge and professional practice in the domain of OER for inclusive education and assist them in searching, evaluating, adapting, creating and sharing OER.

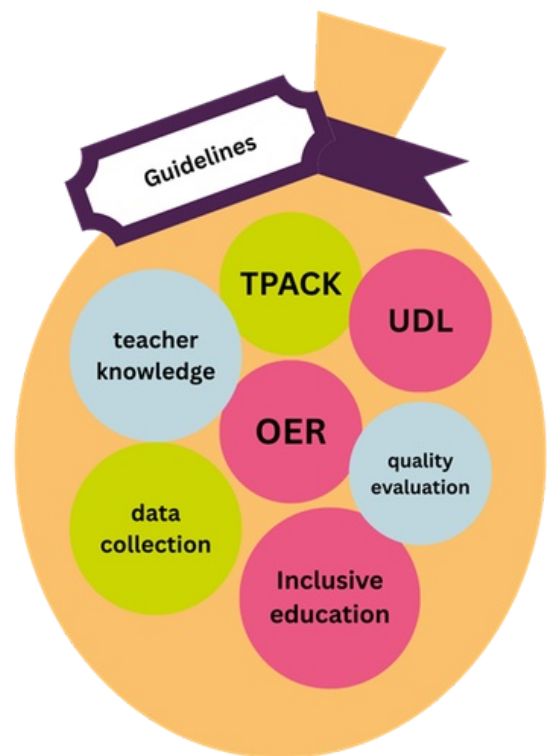


Figure 5.2: The underlying knowledge domains, frameworks and models of the guidelines.

5.1.2. Where do the guidelines come from

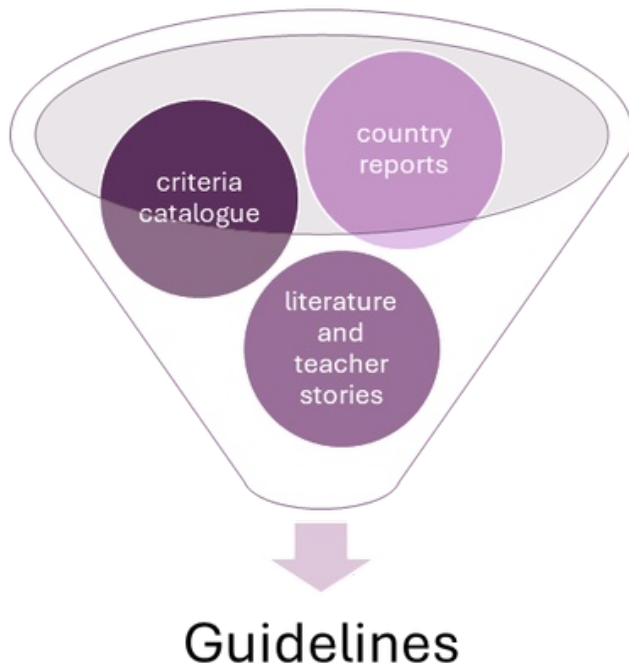


Figure 5.3: the different work packages and related work leading to these guidelines.

These guidelines come from several efforts in the different work packages in the EQuI-T project in addition to knowledge and literature from this research field. In other words, the guidelines are a synthesis of work done across the whole EQuI-T project, see Figure 5.3. They are based on an extensive literature review which has also led to the criteria catalogue; the country reports based on interview and survey data collected across the five partner countries in this project, namely Austria, Estonia, Italy, Norway and Spain and also resulted in the report Guidelines for dissemination of open teaching and learning materials. In addition to the empirical data and literature, teacher stories and good practice examples collected during the teacher training courses and workshops within the EQuI-T project has served to align these guidelines to the target group – primary and secondary school teachers.



5.2 Guidelines for teachers

Now, we will present the hands-on guidelines for searching, evaluating, and sharing OER. The following figure summarises the two main paths within the guidelines: when searching for educational resources and when sharing educational resources (Figure 5.4).

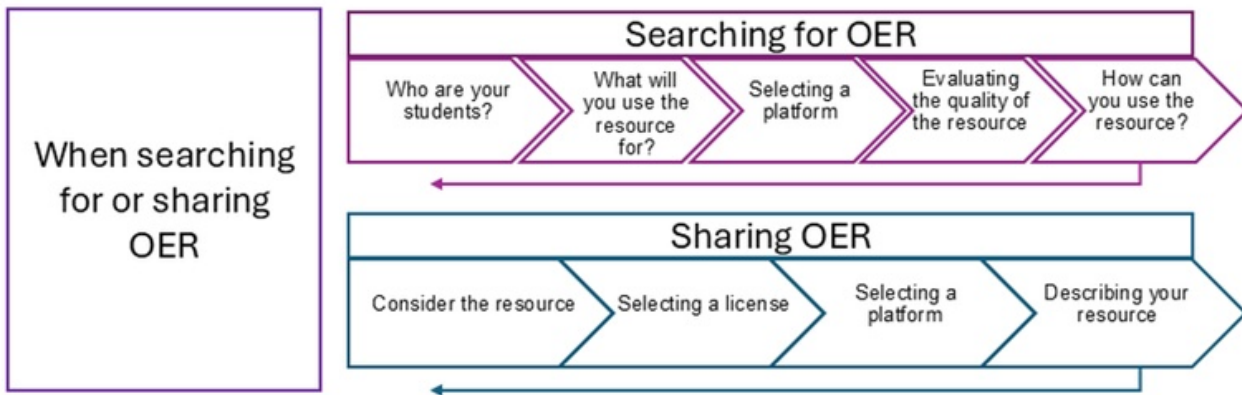


Figure 5.4: An overview of the guidelines, divided into the phases of searching for and evaluating OER and creating and sharing OER.

Given that the process of searching for, selecting, adapting, creating and sharing OER is non-linear and often iterative, we have added arrows in different directions. However, for the sake of simplicity and feasibility, we will present the guidelines as a linear process. Please note that you can use the guidelines starting from the parts that are relevant for your needs and the exact stage at which you are. We will therefore in the continuing divide the infographic illustrated in Figure 5.4 into two and address each path thoroughly.

5.2.1 Searching for resources

The process from searching for digital teaching and learning resources until you, in fact, use them in your class includes several steps as shown in Figure 5.5.



Figure 5.5: The first phase: including the three steps related to searching, continued by evaluation, and adaption of OER.

Before starting the process of searching for a digital teaching and learning resource, you most probably reflect on the composition of your student group. As shown in Figure 5.6, the first question you may reflect on is: *Who are your students?* In other words, what kind of diversity is there in your class? Are there students in your classroom who are high achievers, have learning or language difficulties, students with disabilities or students who may need extra support? Moreover, are there barriers that your students may encounter when working with digital learning resources? Such barriers could be lack of digital competence, or physical barriers such as lack of access to software, for example voice-over or texting. Further, what is the background of your students? Your class might be quite heterogeneous including students with different language, cultural or socioeconomical backgrounds. In Figure 5.6, we have highlighted the three first relevant steps and accompanying questions.

5



WHEN SEARCHING FOR RESOURCES



1

Who are your students?

Know your student group and their learning needs:

- background?
- need for extra support?
- potential barriers?

2

What will you use the resource for?

You want to use the resource as:

- an illustration for a theme
- the main part of the lesson
- an activity for some students
- an activity for all students
- homework



3

Selecting a platform

Identifying a platform for your search:

- official national platforms?
- subject-based platform?
- repositories of OER
- search motor

Figure 5.6: An overview of the first three main steps and related questions teachers need to be aware of when identifying relevant resources.

4

Evaluating the quality of a resource

You can use the EQui-T checklist to evaluate the quality and inclusivity of a resource. Some criteria:

- appropriate for your target group?
- fit your learning goals?
- clear and easy to use?
- alternative texts and/or audio descriptions?



5

What are you allowed to do with the resource?

Check if the resource has a license. A creative commons (CC) license gives you information on how you can use, adapt or remix the resource:

- BY: credit must be given to the creator
- SA: shared under the same terms
- NC: only non-commercial



5

Figure 5.7: The last two steps of the path searching for relevant resources. These include questions related to evaluating the quality of a resource and what you can do with it.

Next, it is essential to ask the question: **What will I use the resource for?** Knowing how the resource will be used will affect your decision when selecting, and which criteria you may apply. You may have a clear idea of how you want to use the digital resource. It might be that you are searching for a resource as support, one that can illustrate the topic in a different way: for instance, a more familiar or engaging resource for your student group. Oppositely, you might be looking for a resource to be used as the main part of the lesson. It is also relevant to reflect across whether the resource is meant for the whole student group or for some students only.

The third step as shown in Figure 5.6, is to identify where to search for teaching and learning resources. As possibilities for finding and sharing OER are quite different across countries, we suggest that you start by identifying if your country or region has developed official platforms for sharing and retrieving OER. If your country or region does not have such platforms, you can try different search strategies, such as searching for websites specifically created to list open educational resources, called Repositories of OER (ROER). You can also search for relevant resources using google or other search-engines, and filter for open or creative common licenses. The last two steps (4 and 5) of the first phase are shown in Figure 5.7 and include evaluating the quality of the resource and what you are allowed to do with the resource.

5.2.2. Sharing OER

When you have successfully searched for and found a resource following the steps in the first phase as shown in Figures 5.6 and 5.7, you might need to adapt that resource to further fit your goals or student group. This is something we know teachers do frequently, adapting and revising materials and practices. Or it might well be the case that you were looking for something that you could not find and therefore develop it yourself. In both cases - either you adapt and revise an existing resource or develop one, the resource might be useful for other teachers. If you consider sharing the revised or newly developed resource, you may follow the four main steps presented in Figure 5.8.



Figure 5.8: The four steps involved in the main path of sharing OER.



The first two steps include considering the resource and selecting a license, and are further illustrated in Figure 5.9.

The first step involves considering if you in fact have the permission to share the resource you have developed or adapted. This depends on how you have developed the resource: whether you have created the resource from scratch, or used images, sounds or other elements that are made by someone else.

If you are the sole author of all elements of the resource, you can skip and go to the next step in Figure 5.9.

If you have created the resource, but used some elements created by others, such as an image, you need to identify the license for that image to know whether you have the permission to use it within your resource. It might be that you only need to add the name of the creator if the image was licensed under CC BY. If the image is not licensed (Creative Commons, public domain, or other types of licenses), you may not have the permission to use it. Consequently, some options might be to consider replacing the image with an open license image, create your own image, remove the image and provide a text which explains the use of the image in the resource, or maybe contact the author and ask.

If you have modified or adapted a resource you found and want to share your own version, check the license for the original resource. It will give you information about whether you can reuse, modify, or adapt the resource and share your own version freely.

Continuing on the sharing path, as shown in Figure 5.10, the third and fourth steps involve selecting a platform and describing the resource (meta data). In the third step you have to decide on which platform to use for sharing. There is a variety of platforms that may be used, and therefore, as shown in Figure 5.10, we suggest considering the main audience and discipline with regard to the resource, and access, popularity and finally the platform's navigation and usability. The fourth and last step includes describing the resource to be shared with relevant information in such a way that others can easily identify it, evaluate its relevance and use it. This includes adding clear title, author information, keywords, target group, information about how to use the resource and how it might be used and adapted for inclusivity and accessibility.

5

WHEN SHARING RESOURCES

1

Consider the resource

Your resource might be all yours, but it might also have elements made by someone else. Consider the following scenarios:

- you created everything from scratch. Congratulations, skip to step 2!
- some elements are made by someone else: check the license for these elements - can you share them in your resource?
- you have modified an existing resource: check the license for the original resource - can you remix or reuse it?

2

Select a license

If you are the sole creator of the resource, you are free to choose the license you want. Open resources can be shared under:

- public domain: you give up your rights to the resource and your name will not be attached to it
- CC BY or CC BY SA: you will be credited when the resource is shared or used.



Figure 5.9: The first two steps of the path Sharing OER: Consider the resource and Select a license.

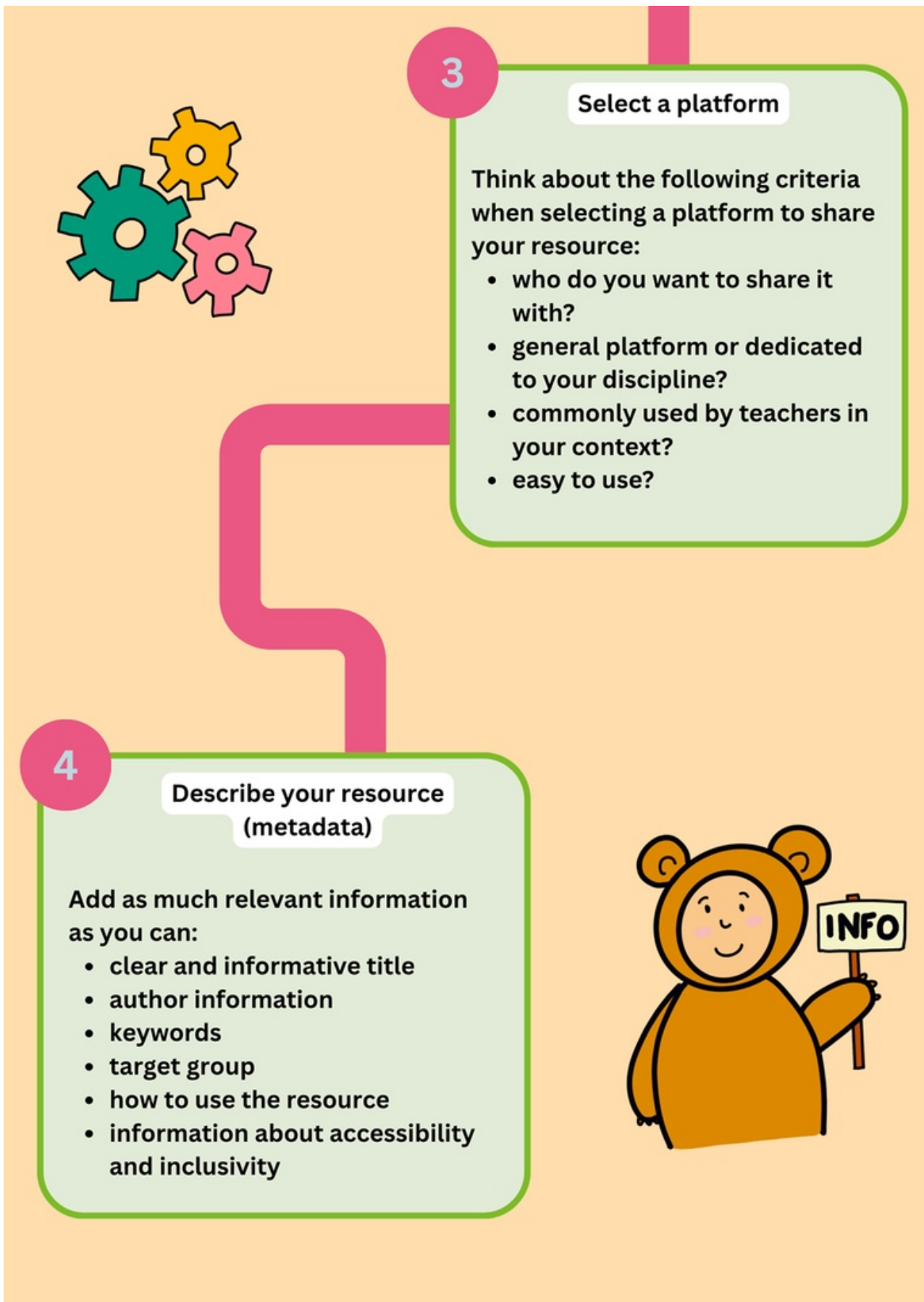


Figure 5.10: The last two steps of the path Sharing OER: Select a platform and Describe your resource.

5.3 Teachers' stories

During the courses conducted within the EQuiT project, teachers have developed and openly shared their teaching and learning materials. In addition, teacher stories were also collected during interviews. In this section, we share three stories to exemplify and narrate the previous sections in this chapter and inspire other teachers to adapt, develop and share open educational resources.

5.3.1 Tailoring Complex Content

One teacher found an engaging online video about climate change that contained valuable information but was originally produced for older children. Recognizing that the language and depth were too advanced for their specific student group, the teacher selected and edited only the most essential and understandable segments of this video. This allowed the students to access the core concepts of the topic without being overwhelmed by complex and/or irrelevant content. Moreover, they added tasks and activities to engage students further into deeper learning. These adaptations invite for further sharing of the adapted

resource – given that original video is shared under an open license. Other adaptations could be created to suit the needs of different student groups, such as captions to the video and audio-descriptions. Also, a new audio track could be added with explanations of the video adapted to the language and competence of the students.

“I adapted a video found online about climate change. The video was aimed at older children than my pupils, so I selected and edited the most important and easily understandable parts for them.”

5.3.2 Pupils as Partners in Adaptation

“I cut out the quiz questions and then mixed them up on the table and said that everyone who had better quiz questions, write them down and then we just made our own quiz, which we glued together, and I just copied that. And then, that was what was in the science exercise book - our own quiz!”

A teacher discovered a high-quality digital resource about the axolotl but found that the accompanying quiz was too easy for their class. Thus, instead of searching for a new resource, the teacher used parts of the resource, followed by turning the students into active partners. In other words, the students contributed to adapting the resource.

By making the pupils active partners in the adaptation of the resource, the teacher can also address different levels and interests in her class. Further, the class created a collaborative physical quiz that was copied into their science exercise books, which the students found motivating and engaged them in the science lesson. This story is also an example of how an activity can combine digital and analogue resources, and how a digital resource can be adapted in an analogue context and further shared.

5.3.3 Creating what you cannot find

Sometimes, it is simply challenging to find what you, as a teacher, are looking for. One teacher shared the importance of catering to pupils' interests to drive motivation and engagement, instead of only following what all other teachers do or textbooks offer.

While searching for digital resources on the topic of animals, the teacher found that while common topics like "lions" were easy to find, more niche topics were missing. When the class jointly shifted interest to otters, the teacher realized there were very few existing tasks and activities available.

Instead of abandoning the topic for something more common, the teacher decided to develop the resources themselves to ensure the students remained motivated and engaged in the learning process. Hence, the teacher realised the importance of further sharing the material they created as it could be highly valuable for the wider teacher community. By following the sharing steps—such as assigning a Creative Commons license and providing descriptive metadata (e.g., keywords like "otters", "science", or "biology"; grades: 3-6; etc)—this teacher could ensure that other teachers searching for niche topics can find these materials easily in the future.

This example demonstrates that the guidelines are not just about finding what is already there, but also about empowering teachers to create and share what is missing to provide a "personalized educational response" for their students.

"The topics vary a lot. They had lions for a while. Then it was just about finding things that have to do with lions. It's just lions, lions, lions. And worse when I switched to otters. There aren't that many people who create tasks with otters. So, we do a lot ourselves."

5

5.4 Summary

Teachers use a combination of activities, tools and resources to engage their students' and meet their diverse needs. This involves reflection on student diversity in the classroom, identifying specific barriers like language difficulties, physical accessibility needs, or competence levels of the students to find the right fit.

Moreover, teachers search for, adapt, revise and/or create open educational resources to move beyond generic materials to provide personalized and inclusive learning experiences. Thus, in this chapter we have presented guidelines for teachers to support the processes involved in 1. searching for and evaluating OER and 2. creating and sharing OER.

The guidelines are practical and easy to use. For example, they support how a teacher can go by to evaluate the quality and fit of the resources identified. The guidelines also support teachers in identifying what they can legally do with a resource they found online and which license (creative commons) they can choose for sharing their own resources.

Finally, we share some teacher stories to inspire other teachers and exemplify the use of the guidelines in real classroom situations. For instance, we demonstrate that "remixing" materials—such as simplifying complex videos or involving students in quiz creation—makes learning more accessible and engaging for all.



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6 The EQui-T teacher training program on inclusive education and Open Educational Resources

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6.1 Introduction: why teacher training matters for inclusive education

As discussed in previous chapters, the increasing diversity of today's classrooms, the ongoing digitalisation in education, and the rights-based imperative for inclusive education place new demands on teachers' professional competences. In this context, high-quality professional development programmes are essential to ensure that educators are equipped with up-to-date knowledge and with practical strategies that can be effectively implemented in schools (UNESCO, 2020).

To this end, one of the main outputs of the EQui-T project has been the development of a curriculum for a pre- and in-service teacher training course. As stated in the UNESCO's Global Education Monitoring Report (2020), in order to be of good quality, teacher education must cover principles and methods for an increasingly inclusive teaching practice. Therefore, the EQui-T teacher training has been designed to equip educators with the skills and knowledge necessary to implement inclusive education strategies.

Through the teacher training, educators will be empowered to create learning environments that respond to the varied abilities and backgrounds of students, apply inclusive teaching strategies, enrich their instructions with accessible materials, particularly Open Inclusive Educational Resources (OIER), and contribute to a culture of inclusion that benefits all learners.

In this chapter, we present the goal, learning objectives, structure and theoretical background of the EQui-T teacher training. This chapter is based in part on existing project documents and has been revised using AI-powered tools (ChatGPT, Open AI, 2026).

6.2 The EQui-T teacher training's goals

This EQui-T teacher training course equips educators with knowledge and practical skills to create inclusive, digitally enhanced learning environments. The training is designed to enhance teachers' competencies in inclusive education, effective digital technology usage, and the design and implementation of high-quality and accessible OIER. The course places significant emphasis on practical application in the classroom setting.

As learning outcomes of the training, teachers will:

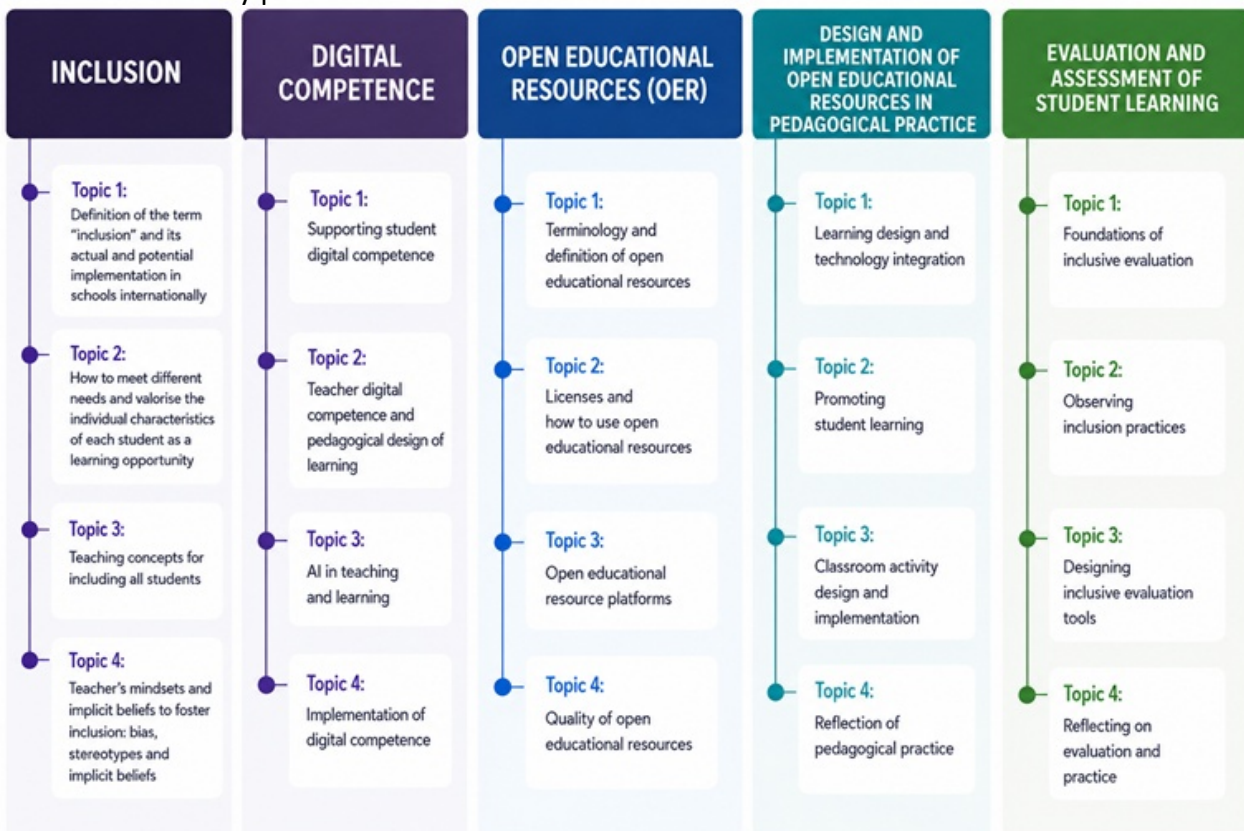
- develop situation-specific skills, enabling them to adapt their teaching methods and strategies to fit the context of an inclusive learning environment;
- be able to design, adapt and implement inclusive teaching strategies that consider the diverse needs of all students;
- develop skills in creating OER fostering inclusive education, using them effectively to enhance teaching and learning experiences;
- be able to critically assess strategies, concepts and materials for use in (one's own) inclusive classroom and, if necessary, the competence to make appropriate adaptations

6.3 Teacher training content: what is covered in the teacher training?

The EQuiT consortium has developed the teacher training course as a structured curriculum organised into five modules, which can be implemented flexibly, depending on participants' needs, prior knowledge and teaching contexts.

The training adopts a practice-oriented and reflective approach, encouraging participants to actively engage with the content and connect it to their own teaching experience. Each module can be delivered either as part of a comprehensive programme or as a standalone course, allowing for flexible use in both pre-service and in-service teacher education contexts. For the development of each module, one of the consortium partners was primarily responsible.

In the following sections, the content of the five modules is presented. For each module, the competences that it aims to develop in teachers are outlined. A 'Why this matters' box highlights the relevance of the topic to everyday teaching practice, and a 'Take-home message' section summarises the key points.



6

Figure 6.1: Structure of the five modules in the EQuiT teacher training course generated with ChatGPT (OpenAI, 2026).


6.3.1 Module 1 - Inclusive education


Lead: University of Graz


The first module of the teacher training focuses on inclusion and on the right to equitable education as foundational principles, recognising that every student brings unique strengths, needs and valuable experiences to the classroom.

This module is structured into four topics (see Figure 6.1). The content of each topic combines theoretical input with individual reflection activities and cooperative group works. These activities are supported by both paper-based and digital materials, including worksheets, reflections prompts, videos and optional in-depth resources for further exploration.

The key concepts addressed in the module are:


 **Inclusion:** Inclusion refers to the process of ensuring that all learners (regardless of their backgrounds, abilities or needs) actively participate, belong and achieve learning outcomes within the same educational environment.


 **Diversity:** Diversity encompasses the wide range of differences among students, including (but not limited to) ability, cultural background, language, gender, socio-economic status and learning styles. Recognising diversity means valuing these differences as resources for learning rather than as challenges to overcome.

 **Intersectionality:** Students' identities are defined by a variety of interconnected aspects. Intersectionality highlights how these aspects (e.g., disability, socio-economic status, migration background) interact with each other and may influence students' experiences and opportunities at school.

 **Developmental trajectories: from segregation to integration toward inclusion**

- Segregation separates learners based on specific characteristics (e.g., disability).
- Integration places students in mainstream settings without necessarily adapting the system to their needs.
- Inclusion transforms the educational environment to enhance the development of all learners from the outset.

 **Universal Design for Learning (UDL):** UDL (CAST, 2018) is an approach to teaching that aims to make learning accessible to all students by offering multiple means of engagement, representation and expression.

 **Cooperative learning:** Cooperative learning is a teaching approach in which students work together in structured ways where every learner matters to achieve shared learning goals, thereby promoting both academic learning and social inclusion.

Why this matters:

Teachers make decisions about inclusion every day, often without explicitly naming them as such. Understanding how the concept of inclusion has evolved helps teachers recognise inclusion as a rights-based principle, rather than an optional practice. By providing a clear framework for interpreting international policies, teachers are supported in translating inclusive values into teaching practices that respond to the diverse needs of all students.

Take Home Message from Module 1

Inclusion aims to promote participation for all students. A central principle is the aim to remove barriers to learning, so that every learner can contribute and participate. Teachers' beliefs, expectations and implicit biases can significantly influence students' learning experiences and outcomes. Reflecting on these aspects is essential for fostering inclusive practices.

MODULE 1

INCLUSION

A continuous journey to ensure that every learner belongs, participates and thrives in education.



<p>1</p>	<p>Topic 1: Definition of the term "inclusion" and its actual and potential implementation in schools internationally</p> 	<p>Learning objectives</p> <ul style="list-style-type: none"> • Get to know different definitions of inclusion and critically reflect them • Recognize the importance and benefits of inclusion for all learners. • Reflect on personal experiences and beliefs about inclusion. 	<p>Why it matters</p> <p>Inclusion is a right, not an option. Understanding its meaning and international frameworks helps teachers make informed decisions and turn policies into actions in their classrooms.</p> 
<p>2</p>	<p>Topic 2: How to meet different needs and valorise the individual characteristics of each student as a learning opportunity</p> 	<p>Learning objectives</p> <ul style="list-style-type: none"> • Identify different learner needs and individual characteristics. • Understand how diversity enriches learning and the classroom community. • Adapt teaching approaches to value and respond to diversity. • Create inclusive learning experiences where all students can grow and succeed. 	<p>Why it matters</p> <p>Every learner brings strengths, experiences and needs. Recognising and valuing diversity allows teachers to design learning experiences where all students can grow and succeed.</p> 
<p>3</p>	<p>Topic 3: Teaching concepts for including all students</p> 	<p>Learning objectives</p> <ul style="list-style-type: none"> • Understand key inclusive teaching principles and strategies. • Apply practices that promote participation and belonging. • Support collaboration and positive relationships in the classroom. • Design learning environments to promote inclusion. 	<p>Why it matters</p> <p>Inclusive teaching strategies, such as cooperative learning, promote participation, build belonging and help every student contribute and learn from others.</p> 
<p>4</p>	<p>Topic 4: Teacher's mindsets and implicit beliefs to foster inclusion: bias, stereotypes and implicit beliefs</p> 	<p>Learning objectives</p> <ul style="list-style-type: none"> • Explore personal mindsets, beliefs and assumptions. • Identify bias, stereotypes and their impact on learning. • Develop a growth mindset and inclusive attitudes. • Commit to ongoing self-reflection and professional growth. 	<p>Why it matters</p> <p>Our beliefs influence our actions. Reflecting on bias and stereotypes helps teachers create always more supportive and always more inclusive learning environments for all.</p> 

“ Inclusion is everyone’s responsibility. Together, we build schools where every learner belongs, participates and thrives. ”

Figure 6.2. Infographic summarizing the topics, learning objectives and "why it matters" for Module 1 generated with ChatGPT (OpenAI, 2026).

6.3.2 Module 2 - Digital competence

Lead: University of South-Eastern Norway

The second module of the EQui-T Teacher training focuses on the use of digital technologies (including AI and assistive technologies) to support individualised learning processes. This module is structured into four topics, combining theoretical input, individual reflection and collaborative group work. Activities include hands-on use of digital tools, peer feedback and the creation of digital materials (e.g., videos, podcasts). The module follows a practice-oriented and reflective approach, supporting teachers in applying digital competences in their teaching contexts. It emphasises the careful selection of tools and materials, and offers possibilities to adapt them to students' diverse needs in favour of their learning outcomes.

Why this matters:

Digital competence has become a fundamental requirement for both teaching and learning. Teachers are not only expected to use digital tools, but to do so in ways that are educationally sound, inclusive and responsive to diverse learners' needs.

This involves continuously developing one's own digital competences, critically engaging with emerging technologies such as AI, and reflect on when and how to use them. Ultimately, the goal is not the use of technology itself, but its purposeful integration to enhance learning, foster participation and reduce barriers for all students.

Take-Home Message from Module 2

Digital technologies can significantly enhance teaching and learning when used appropriately. Their value lies in supporting individualised learning processes, responding to diverse student needs and fostering inclusion.

Teachers' own digital competence is key: by critically selecting tools (including AI), reflecting on their use and aligning them with pedagogical goals, teachers can create more accessible, flexible and inclusive learning environments.

Technology itself does not automatically create inclusion; it is how teachers use it that matters.

MODULE 2:

Using digital technologies (including AI and assistive technology) for individualising learning processes and experiences

- Apply digital technologies for individualised learning
- Carefully select materials and tools for teaching
- Use domain-specific diagnostic competences to adapt learning

1 Topic 1: Supporting student digital competence

Learning objectives

- Apply digital technologies, including AI and assistive technology, that facilitate individualised learning processes and experiences.
- Explore and assess learning material and tools for students' individualised learning processes.
- Use frameworks and pedagogical methods that address the diverse needs of all students.

Why it matters

Digital competence is essential for participation in today's society and education. Teachers play a key role in supporting students in developing these competences while ensuring that digital tools are used in inclusive and meaningful ways that respond to diverse learning needs.

2 Topic 2: Teacher digital competence and pedagogical design of learning

Learning objectives

- Reflect on and develop teachers' own digital competence.
- Use digital competence frameworks (e.g., DigCompEdu) for self-assessment and professional growth.
- Design pedagogical approaches that use digital tools to support inclusive and individualised learning.

Why it matters

Teachers' own digital competence directly influences how effectively digital tools are used in the classroom. Continuous reflection and development enable teachers to design inclusive and effective learning environments for all students.

3 Topic 3: AI in teaching and learning

Learning objectives

- Understand the opportunities and limitations of AI in education.
- Reflect on the use of AI and relevant competency frameworks for teachers and students.
- Engage in peer feedback and discussion to critically evaluate AI in practice.

Why it matters

AI can enhance learning, creativity and efficiency—but it can also reinforce biases or create new barriers. Understanding and using AI responsibly ensures it supports inclusion and equitable learning opportunities for all.

4 Topic 4: Implementation of digital competence

Learning objectives

- Select and use digital tools to support differentiated and individualised learning.
- Document and share practice using digital materials and tools.
- Collaborate to create real-world outputs that integrate digital competence, inclusion and AI.

Why it matters

Translating digital competences into concrete teaching practices leads to more inclusive classrooms and better learning outcomes for every student.

LEARNING OBJECTIVES (OVERALL MODULE 2)

- Cross-disciplinary approach**: Connect different subjects and perspectives.
- Peer feedback and discussion**: Learn from others and share best practices.
- Individual & self-reflection**: Develop awareness and responsibility.
- Digital & paper-based learning**: Combine tools and methods effectively.
- Clear learning objectives**: Stay focused on meaningful outcomes.

6

Figure 6.3: Infographic summarizing the topics, learning objectives and "why it matters" for Module 2 generated with ChatGPT (OpenAI, 2026).

6.3.3 Module 3 - Open Educational Resources (OER)

Lead: PPH Augustinum & PH Steiermark

This module introduces teachers to OER and their role in supporting inclusive and equitable education. Participants explore key concepts, licensing systems (in particular Creative Commons) and different platforms and repositories of OER. The module also focuses on the evaluation, adaptation and creation of high-quality OER, with particular attention to accessibility, diversity and inclusive teaching practices.

Why this matters:

Open Educational Resources provide teachers with flexible and adaptable materials that can be tailored to the diverse needs of their students. Understanding and practicing how to find, use, evaluate and adapt OER allows teachers to reduce barriers to learning and promote equal access to education.

Take-Home Message from Module 3

When created to a high standard and adapted according to the needs of the students, OER can be tools for creating more equitable and inclusive education.



6

Figure 6.4: Infographic summarizing the topics, learning objectives and "why it matters" for Module 1 generated with ChatGPT (OpenAI, 2026).

6.3.4 Module 4: design and implementation of OER in pedagogical practice

Lead: University of Tallinn

This module focuses on inclusive teaching principles, digital technologies in lesson design and on the practical application of OER in the classroom. Teachers develop, adapt and implement lesson plans that integrate OER, foster student engagement through the ICAP model (Interactive, Constructive, Active, Passive; Chi & Wylie, 2014; presented in section 4 of this chapter) and respond to diverse learning needs. The module emphasises reflective practice and supports teachers in translating theory into effective classroom implementation.

Why this matters:

Designing inclusive and engaging lessons is at the core of effective teaching. By combining OER, digital tools and evidence-based pedagogical approaches such as the ICAP model, teachers can create learning environments that actively involve all students. This approach helps move beyond passive learning and supports deeper understanding, participation and equity in the classroom.

Take-Home Message from Module 4

It is not the tools themselves, but how they are designed and used, that makes learning inclusive and effective.

MODULE 4

Design and Implementation of OERs in Pedagogical Practice

1	<p>Topic 1: Learning design and technology integration</p>	<p>Learning outcomes</p> <ul style="list-style-type: none"> Apply principles of learning design to create technology-enhanced lessons that are inclusive and student-centered. Select and integrate digital tools and OER that support diverse learners and foster higher-order engagement within the ICAP framework. Redesign a previous lesson plan or design a lesson plan to strengthen technology use, inclusivity, and constructive/interactive activities. Evaluate and justify their design choices based on evidence of accessibility, cognitive engagement, and pedagogical effectiveness. 	<p>Why it matters</p> <p>Thoughtful lesson design ensures that technology supports inclusion, engagement, and meaningful learning for all students.</p>
2	<p>Topic 2: Promoting student learning (ICAP model)</p>	<p>Learning outcomes</p> <ul style="list-style-type: none"> Explain the four engagement modes of the ICAP model—Interactive, Constructive, Active, and Passive—and their impact on student learning. Analyze classroom activities to identify the level of cognitive engagement they promote. Design lesson plans or tasks that intentionally move students toward constructive and interactive learning experiences. Evaluate student engagement using ICAP-informed observation and assessment strategies. 	<p>Why it matters</p> <p>Students learn more deeply when they actively construct and interact with knowledge rather than passively receive it.</p>
3	<p>Topic 3: Classroom activity design and implementation</p>	<p>Learning outcomes</p> <ul style="list-style-type: none"> Select and adapt OER that meet licensing requirements and align with curriculum goals. Apply inclusive education principles to ensure the lesson plan addresses diverse learning needs and fosters equitable participation. Design learning activities that intentionally progress from Passive to Interactive engagement according to the ICAP model. Integrate digital tools and open resources to enhance accessibility and student collaboration. Reflect on and justify design choices, explaining how OER, inclusivity, and ICAP-based strategies improve student learning outcomes. 	<p>Why it matters</p> <p>Well-designed lessons that combine OER, inclusion, and ICAP create meaningful, engaging, and equitable learning experiences for every student.</p>
4	<p>Topic 4: Reflection of pedagogical practice</p>	<p>Learning outcomes</p> <ul style="list-style-type: none"> Evaluate how their implemented lesson plan aligned with intended learning objectives, ICAP engagement levels, and inclusive practices. Analyze the effectiveness of selected OER in supporting student understanding and participation. Identify successes, challenges, and areas for improvement in lesson delivery and classroom management. Formulate specific strategies to refine future lesson plans for stronger inclusion, digital integration, and active learning. Describe key insights gained from peer feedback and self-reflection to inform ongoing professional growth. 	<p>Why it matters</p> <p>Reflection turns experience into learning. It helps teachers improve continuously and design even more inclusive and effective lessons.</p>
<p>✓ Inclusive and engaging learning does not happen by chance—it is the result of intentional design, implementation, and reflection.</p>			

6

Figure 6.5: Infographic summarizing the topics, learning objectives and "why it matters" for Module 4 generated with ChatGPT (OpenAI, 2026).

6.3.5 Module 5 - evaluation and assessment of student learning

Lead: University of Padova

This module focuses on inclusive approaches to evaluation and assessment in education. It supports teachers in understanding how to observe, assess and reflect on student learning and classroom dynamics in ways that promote inclusion and equity. Building on theoretical foundations and practical tools, teachers learn to design and apply evaluation strategies to capture not only students' academic outcomes but also their participation, social interaction and learning progresses.

Why this matters:

Assessment plays a crucial role in shaping teaching and learning. Inclusive evaluation helps teachers recognise not only what students achieve, but also how they participate, interact and develop within diverse learning environments. By using appropriate tools and approaches, teachers can identify barriers to inclusion, support all learners more effectively and foster equity and participation.

Take-Home Messages from Module 5

Inclusive approaches to evaluation ensure that barriers are identified and every student's progress and participation is recognised.

MODULE 5.

EVALUATION AND ASSESSMENT OF STUDENT LEARNING

INTRODUCTION

This module helps teachers use evaluation of inclusive practices to understand student learning, participation and progress.

It provides practical tools and approaches to observe, assess and reflect on learning and classroom dynamics, so teachers can make informed decisions that support every learner.

1

Topic 1: Foundations of evaluation of inclusive processes

Learning outcomes
The teachers are able to...

- use practical tools to observe inclusive behaviors and social dynamics in the classroom.
- assess the effectiveness of inclusive learning activities, including those based on Universal Design for Learning (UDL).
- develop critical thinking, analytical skills, problem-solving, and classroom management adaptability.

Why it matters

Evaluation of inclusive processes helps teachers understand not only what students learn, but how they participate and experience the learning environment.

2

Topic 2: Observing evaluation of inclusive processes

Learning outcomes
The teachers are able to...

- distinguish between quantitative and qualitative observation tools.
- apply structured observation grids and instruments.
- reflect on student experiences using narrative-based techniques.
- use instruments for including students voices; instruments of participative research.
- integrate mixed methods to support inclusive decision-making.

Why it matters

Systematic observation and participative research allow teachers to identify patterns of participation and exclusion and respond more effectively to students' needs.

3

Topic 3: Designing tools for inclusive learning

Learning outcomes
The teachers are able to...

- adapt evaluation tools to specific learning goals and student groups.
- select appropriate quantitative and qualitative instruments.
- critically evaluate tools based on validity, reliability, and relevance.
- design and co-create inclusive evaluation tools for their practice.
- conduct participative research with children.

Why it matters

Well-designed evaluation tools provide meaningful insights that support both teaching decisions and student development.

4

Topic 4: Reflecting on evaluation of inclusive processes and practice

Learning outcomes
The teachers are able to...

- analyse the outcomes of their evaluation practices.
- identify strengths, challenges, and areas for improvement.
- reflect on the impact of evaluation on inclusion and participation.
- plan improvements for future teaching and assessment practices.

Why it matters

Reflection transforms evaluation into a tool for continuous improvement and more inclusive teaching.

KEY TAKE-HOME MESSAGE

“ Evaluation of inclusive processes goes beyond measuring performance—it helps teachers understand learning processes, social dynamics, and participation.
What we choose to assess shapes what we value in learning—evaluation of inclusive processes ensures that every student's progress and participation are recognised. ”

6

Figure 6.6: Infographic summarizing the topics, learning objectives and "why it matters" for Module 5 generated with ChatGPT (OpenAI, 2026).

6.4 Design elements of the training: how did we develop the training?

For the EQuiT teacher training design, we engaged teachers to co-design new practices, to develop materials and adapt them to their specific subjects and contexts, to implement them in the classroom and to participate in individual and collective reflection. Pedagogical elements of the EQuiT teacher training are based on elements suggested by Ley et al. (2022) to promote social learning practices and on the ICAP framework (Chi & Wylie, 2014) to foster cognitive engagement of the learners. The ICAP framework (see Figure 6.7) suggests that cognitive engagement in learning activities can be categorized into four modes:

- Interactive mode of learning: co-creation, review and provide feedback on each other's lesson plans, teaching materials, or strategies;
- Constructive mode of learning: creation of learning materials, lesson plans;
- Active mode of learning: participation in discussions, writing summaries;
- Passive mode of learning: getting familiar with the key concepts, theoretical foundations through reading, watching videos, listening to lectures.

In addition, several considerations have guided the conceptual development of the training courses. For instance, the need for a sound theoretical foundation paired with a clear focus on practical relevance, up-to-date didactics and a high degree of interactivity. In this way, the teacher training course not only conveys methodological knowledge (e.g., differentiated instruction, differentiated assessment, differentiated material), but it also encourages participants to directly apply their knowledge by co-designing, developing and implementing materials, lesson plans, etc. for their own teaching in their classroom. The result is a joint learning offer (teacher training courses) with a strong European dimension, which has been developed and implemented by the EQuiT Consortium.

For more information on the design principles of the training programme, see the “In-Depth Box” in the appendix.

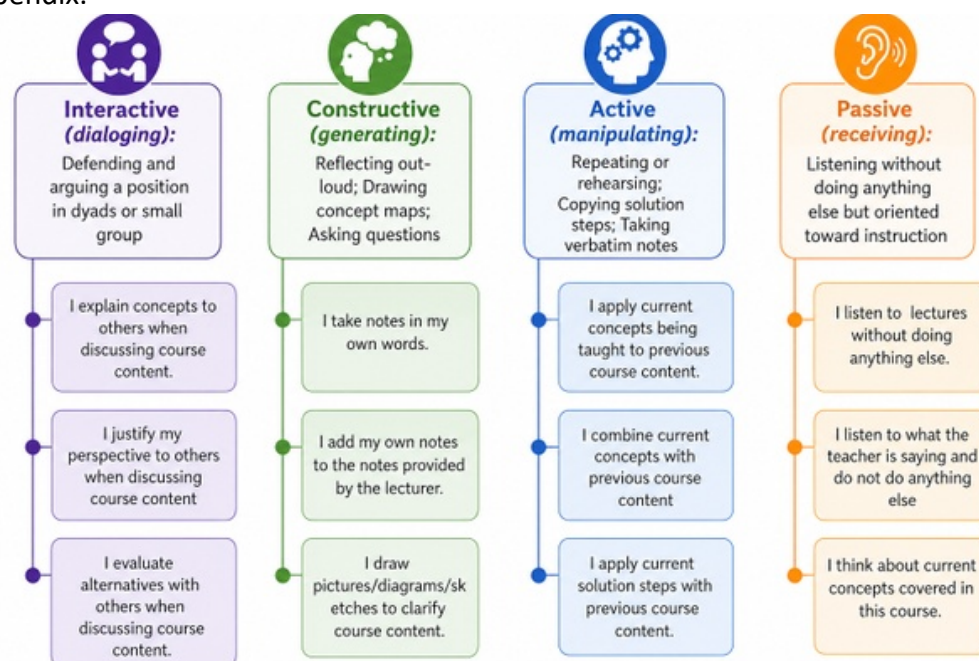


Figure 6.7: ICAP elements in the course design. Adapted from Barlow and colleagues (2020) generated with ChatGPT (OpenAI, 2026).

6.5 Teacher's stories

The following section presents reflections and feedback from students attending the teacher training in Austria during the winter semester 2025/26 at the Private University College of Teacher Education Augustinum (PPH Augustinum) and during the summer semester 2026 at the University of Graz.

Participant's reflections showed how having attended the training changed their attitudes and beliefs about OER, and the perceived cost-benefit ratio for developing and using them in their classroom:

The increased time required made it clear that incorporating OER into teaching cannot simply be done on the side. At the same time, we realised that this investment leads to more sustainable and thoughtful lesson preparation in the long term.

Students who worked with the EQui-T framework and checklist reported how these experiences provided practical insights into the creation of more accessible, inclusive and pedagogically sound learning materials:

We have also focused on following the EQui-T checklist. In doing so, we have systematically incorporated relevant aspects, such as diversity awareness, so that all learners can benefit from our materials.

We have paid particular attention to incorporating EQui-T's inclusive quality criteria. For example, all materials are available as Word and PDF files and can therefore be adapted to the pupils' needs.

6

Furthermore, they expressed a willingness to continue working toward creating accessible and high-quality material for their students:

From now on, I will make sure that all the materials I create are accessible, and I will check this in Word as well; when saving, I will ensure that my materials are screen reader-friendly. (Pfister, 2026)

For my future lesson planning, I also want to use the EQui-T criteria catalogue from time to time to assess whether my materials are inclusive. This would allow me to specifically evaluate whether my assignments are clear, differentiated, accessible and suitable for students with varying learning needs. (Winkler, 2026)

Students attending the teacher training reported a changed attitude and understanding of inclusive practices:

With what I know now, I would naturally view the situation [of having in the classroom a pupil with less advanced mathematical knowledge than the others students] more from the perspective of inclusion. To me, inclusive teaching doesn't mean that all students must always be doing the same thing at the same time and at the same level. Rather, instruction should be designed to take different starting points into account. Students simply need different ways to engage with the material, different opportunities to practice and different ways to demonstrate their skills. (Winkler, 2026)

There are also many barriers that aren't immediately apparent. [...] In the future, I will pay even closer attention to identifying my students' needs and barriers and adapting my teaching accordingly. I have learned that OER exist, and I will definitely use them, as they offer an incredible range of possibilities and these materials are versatile in the classroom. I often struggle to find suitable materials, so I am grateful that I have now learned about OER. (Pfister, 2026)

Students generally responded very positively to the course, which filled a gap in their teacher education curriculum:

The training has broadened my horizons. I've learnt so much and feel really inspired for my future teaching. (Pignitter, 2026)

6.6 Conclusion

The EQuI-T teacher training programme aims to support teachers in creating more inclusive, equitable and participatory learning environments. Throughout the five modules, participants (pre-service and in-service teachers) can explore the topics of inclusive pedagogy, Open Educational Resources (OER), learning design, student engagement and evaluation of inclusive processes in classrooms and schools. The training encourages teachers to critically reflect on their practices, recognize diversity as a strength, develop strategies that respond to the needs and include the voices of all learners.

By combining inclusive educational principles with practical tools and collaborative approaches, the training highlights the importance of accessibility, participation, reflection and continuous professional growth. Through the training, teachers are invited not only to adapt resources and teaching methods, but also to foster learning environments where every student feels valued, represented and actively involved.

Ultimately, the EQuI-T teacher training promotes the idea that inclusive education is an ongoing process built through collaboration, reflection and a strong commitment to educational equity for all learners.

6.7 Summary

One result of the EQui-T project is an open teacher training course about inclusion and open educational resources (OER).

- The course has five modules: inclusive education, digital skills, OER, using OER in teaching practice, and evaluation and assessment of inclusive practices.
- The training is based on the ICAP model (Interactive, Constructive, Active, Passive).
- Teachers who attended the course said that it helps fill an important gap in teacher education.



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- Pignitter, M. T. (2026). Teacher Story für den inklusiven Geschichtsunterricht. [Teacher Story for inclusive history classes.] OER-Portal Universität Graz. One result of the EQui-T project is an open teacher training course about inclusion and open educational resources (OER).
- The course has five modules: inclusive education, digital skills, OER, using OER in teaching practice, and evaluation and assessment of inclusive practices.
- The training is based on the ICAP model (Interactive, Constructive, Active, Passive).
- Teachers who attended the course said that it helps fill an important gap in teacher education.
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6.8 Appendix. In-Depth Box - Design principles of the training programme

In the theoretical justification of the developed training program, we highlight the critical role of teachers' general pedagogical knowledge (GPK) on inclusive education, alongside subject-specific knowledge, beliefs, motivation and self-regulation as foundational to their professional competence and effectiveness in fostering learning processes (Révai & Guerriero, 2017). Recent models of professional competence stress the significance of situation-specific skills for transferring knowledge into effective teaching practices (Blömeke et al., 2015; Krauss et al., 2020).

Based on Shulman's (1986) prior work, the TPACK model (Mishra & Koehler, 2006) brings together the three important knowledge domains of teaching in technological contexts (content CK, pedagogy PK and technology TK) and highlights the complex interplay of these three knowledge components. Teachers' technological pedagogical (and) content knowledge (TPACK) is central to the model and refers to teachers' knowledge of how to successfully integrate educational technologies using appropriate pedagogical methods for their discipline.

General pedagogical knowledge is categorised into two types: theoretical-scientific (declarative) knowledge and practice-based (procedural and conditional) knowledge, as outlined by Révai and Guerriero (2017). Theoretical-scientific knowledge encompasses pedagogical concepts and facts from educational research serving as the foundational "knowing what". Practice-based knowledge entails procedural and conditional knowledge (Anderson, 1996), covering the "knowing how" through procedures for planning and implementing lessons and the "knowing when and why" to apply specific pedagogical theories and methods in classroom situations.

Research has shown that both types of knowledge are essential for expert teaching performance (Bromme, 2001). However, transforming knowledge into effective practice requires situation-specific skills (Blömeke et al., 2015), suggesting that knowledge alone is not enough, but it acts indirectly on teaching and learning outcomes, mediated by these critical skills and they highlight the complex interplay between knowledge and practical application in teaching (see Figure 6.8).

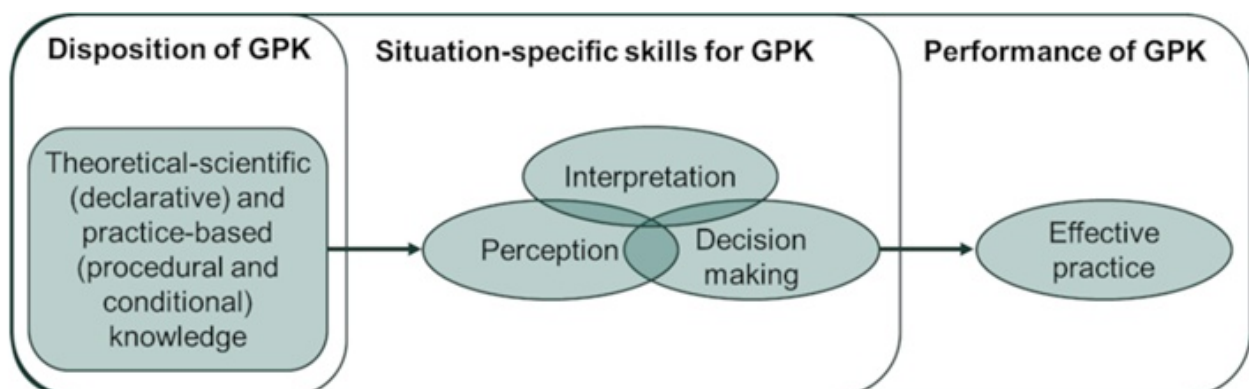


Figure 6.8: Competency framework for situation-specific skills, adapted from the competence model of Blömeke, Gustafsson and Shavelson (2015).

According to this model, teachers must continuously observe the classroom to pinpoint moments (cues) and signals crucial for successful teaching and student learning (perception).

In this context, their knowledge serves as a lens, focusing their attention on the significant actions. Teachers are then tasked with evaluating this information through the lens of teaching and learning principles (interpretation) to inform their teaching choices and make decisions. It is assumed that decision-making in classrooms assumes a great breadth and depth of pedagogical knowledge (e.g., knowledge about various instructional approaches and how they impact student learning and when to apply them).

Regarding teacher trainings, research has shown that the way teacher training is designed, can play an important role on how teachers will integrate innovative methods, including digital technologies into their teaching and how it reflects in their changed practices (Darling-Hammond et al., 2017). Through the systematic instruction of learning principles and concepts, teachers are developing new mental models about the fundamentals of key theoretical approaches. At the same time, a situational approach is important to produce changes in the practice. Professional development that is job-embedded and situated into authentic classroom practice, enables teachers to construct meaning from their authentic experiences in which new knowledge is to be applied (Girvan et al., 2016; Lave & Wenger, 1991). Through supported systematic reflection, teachers are able to connect their prior knowledge and experiences and integrate new knowledge into mental models.

The role of teachers' collaboration has been highlighted in several studies focusing on effective teachers' professional training. One of the possibilities is to implement one-to-one mentoring or coaching, especially in the context of a teacher's own classroom to get feedback. Koh et al. (2017) applied for instance teacher design teams to co-design lesson plans, implement those and reflect collaboratively about the experience and found that structured theoretical approach and collaborative practice-based training holds a potential to be an effective teacher training approach. Similarly, a study of Ley et al. (2022) revealed that design of the teacher PD with the elements of iterative co-creation of novel learning designs, which are piloted and evaluated by the teachers in their classroom and collectively reflected, leads to higher adoption of learnt teaching strategies.

This could also be a very fruitful approach to establishing inclusive teaching practices. However, it would only be effective if implemented consistently as a systematic practice with clear objectives and sufficient time for discussion. It is also important that the teachers involved in co-teaching are able to establish a common view of teaching and a shared responsibility of their teaching practices (Krammer et al., 2018a). Analysis of teaching in co-teaching teams indicated that team characteristics influenced the subjective evaluation of self-efficacy expectations of the team members much more than individual characteristics of the teachers or the social context in which the co-teaching teams worked (Krammer et al., 2018b).

Particularly in school classes with high diversity of students, the opportunity to incorporate the 'voices of students' in the joint analysis and reflection of the teaching process would be very relevant. In this way, teaching and learning methods can be better aligned with the needs of different students (see also chapter 2, Messiou et al., 2020).

6



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Evaluation in Teacher Training for Inclusive Education

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7.1 Introduction

When teachers and educators are asked to design personalised learning pathways, define objectives, and select strategies to promote knowledge, skills, and attitudes, they are also inevitably required to engage in processes of verification and evaluation. These processes cannot be considered secondary or merely administrative; rather, they represent an integral part of teaching itself. In inclusive education, evaluation becomes a crucial moment for understanding whether what has been planned has actually been achieved and, above all, how teaching practices can be improved.

In this perspective, evaluation should not be interpreted as a technical or bureaucratic act, but as a reflective and formative process that allows teachers to attribute meaning to their actions. It supports professionals in analysing their choices, questioning their assumptions, and understanding the impact of their teaching on students and on the classroom climate. As highlighted in the literature, evaluation is not limited to measuring outcomes but involves a broader process of “giving value” to educational actions and experiences (Santilli et al., 2020).

Building on this premise, the chapter proceeds as follows: it first explores evaluation in inclusive settings; then analyses teacher training evaluation with respect to efficacy, effectiveness, and sustainability; followed by a review of methods and tools, and concludes with a multi-level framework for inclusive evaluation.



7.2 Evaluating the level of inclusion

Inclusion is not simply a principle to be declared, but a complex process that takes shape in everyday school practices. It involves promoting participation, ensuring access to learning opportunities, fostering positive relationships, and creating a classroom climate in which diversity is recognised and valued. Evaluating inclusion, therefore, means observing what actually happens in the classroom: how students interact, how they participate, and how teaching strategies and practices respond to their different needs.

If inclusion is considered a fundamental objective of education, then evaluation becomes an essential component of the teaching-learning process. It allows teachers to determine whether the objectives they have set have been achieved and to decide how to proceed. In particular, evaluation supports teachers in identifying obstacles to participation, recognising students’ strengths, analysing the effectiveness of teaching strategies, and planning further interventions. In this sense, evaluation is closely linked to decision-making and professional responsibility. When objectives are not achieved, teachers are encouraged to reflect on their actions—questioning the adequacy of the objectives, the effectiveness of the strategies used, and the appropriateness of the activities proposed (Elliott, 1991; Gresham, 1991; Soresi et al., 2002).

However, evaluation is a deeply human activity and, as such, it is inevitably influenced by subjective values and perspectives. It involves comparing an event or performance against a reference system of values and expressing a judgment. For this reason, it is important to recognise the risks associated with evaluation processes. Among the most relevant risks are the arbitrariness of evaluation criteria, the transformation of qualitative judgments into apparently objective numerical scores, and the lack of transparency regarding criteria and purposes. These aspects highlight how evaluation can become a tool of control rather than a resource for learning (Zarka, 2015). In inclusive contexts, this risk is particularly critical, as evaluation practices may reinforce inequalities and undermine trust within educational relationships.

To support inclusion, evaluation needs to be rethought. Rather than aiming for impossible objectivity, it is more useful to acknowledge subjectivity and confront it with other perspectives. Involving students, families, and colleagues allows for a more comprehensive understanding of educational processes. Furthermore, evaluation criteria should be made explicit and flexible, so that they can adapt to individual situations and unexpected developments. Evaluation should also focus on understanding learning processes rather than assigning labels. Instead of stating that a student is “insufficient,” it is more meaningful to analyse how the student approaches a task, which difficulties they encounter, and what support they need. In this way, evaluation becomes a tool for dialogue, reflection, and improvement, contributing to the construction of more inclusive learning environments (Pagani & Robustelli, 2010; Santilli et al., 2020). This is particularly relevant when we consider the specific domain of teacher training.

7

7.3 Evaluating Teacher Training

Teacher training represents a dynamic process of continuous professional development, and its evaluation should be oriented towards understanding how learning experiences influence teaching practices. Evaluation allows teachers to reflect on their professional growth, analyse the changes introduced in their classrooms, and assess the sustainability of these changes over time. In this sense, evaluation is not limited to verifying whether learning has occurred, but extends to examining how training affects professional behaviour and educational contexts.

Within this perspective, evaluation plays a crucial role in helping teachers make sense of their teaching and learning experiences and understand how these experiences influence their professional practice over time. Evaluating teacher training does not simply mean verifying whether specific content has been acquired; instead, it involves analysing how training contributes to transforming teaching practices, professional beliefs, and the capacity to respond to diverse and inclusive educational contexts.

In inclusive education, this process becomes even more relevant. Evaluation, therefore, represents a key tool for connecting training experiences with classroom realities, allowing teachers to reflect on their practices critically and to adapt them in response to students' needs (Santilli et al., 2020). From this perspective, the evaluation of teacher training can be articulated through three interconnected dimensions: efficacy, effectiveness, and sustainability. These dimensions provide a comprehensive framework that allows educators and researchers to move beyond a narrow focus on immediate outcomes and to consider the broader and long-term impact of training processes (William, 2003).

7.3.1 Efficacy

The first dimension, efficacy, refers to the extent to which the objectives of a training programme are achieved. At this level, evaluation focuses primarily on the acquisition of knowledge, skills, and attitudes promoted during the training. Typical questions include:



Efficacy is often assessed through quantitative tools such as questionnaires, tests, or self-assessment scales, which allow for a relatively immediate measurement of learning outcomes. However, while this dimension is important, it remains limited if considered in isolation. Achieving training objectives does not necessarily guarantee that what has been learned will be transferred into practice.

In inclusive education, this limitation is particularly evident. Teachers may demonstrate knowledge of inclusive strategies, yet still encounter difficulties in applying them in complex classroom contexts. For this reason, efficacy should be interpreted as a necessary but not sufficient condition for meaningful professional development.

7.3.2 Effectiveness

The second dimension, effectiveness, concerns the extent to which what has been learned during training is actually applied in teaching practice. This dimension shifts the focus from "knowing" to "doing," emphasising the translation of knowledge and skills into concrete actions within the classroom.

Evaluating effectiveness requires observing changes in teaching practices, classroom management, instructional strategies, and interactions with students. It involves questions such as:



At this level, qualitative methods become particularly important. Classroom observations, reflective journals, peer feedback, and interviews allow for a deeper understanding of how training influences everyday practice. These tools help capture the complexity of teaching, which cannot be fully understood through quantitative measures alone (Soresi & Nota, 2010).

Research highlights that the transfer of training into practice is influenced by multiple factors, including school climate, institutional support, and opportunities for collaboration. Teachers are more likely to apply what they have learned when they operate within supportive environments that encourage experimentation, reflection, and shared responsibility (Ainscow & Sandill, 2010). Therefore, evaluating effectiveness also requires considering the context in which teachers work.

7

7.3.3 Sustainability

The third dimension, sustainability, refers to the long-term maintenance and development of changes introduced through training. This dimension addresses a fundamental question: Do the effects of training persist over time, and do they evolve in response to new challenges?

Sustainability moves beyond short-term evaluation and considers whether training leads to stable transformations in professional practice and identity. It involves analysing whether teachers continue to use inclusive strategies, whether they adapt them to different contexts, and whether they engage in ongoing professional reflection.

In this sense, evaluation becomes closely linked to the concept of continuous professional development. Training is not seen as a one-time intervention, but as part of an ongoing process in which teachers progressively refine their competences and reconstruct their professional knowledge (Soresi et al., 2002).

Sustainability is also strongly connected to collaborative and organisational dimensions. When training outcomes are shared within professional communities, through peer collaboration, mentoring, and collective reflection, they are more likely to be maintained and expanded over time. Conversely, when training remains an individual experience, its effects tend to diminish more quickly.

Although efficacy, effectiveness, and sustainability can be analytically distinguished, they should not be considered as separate or independent. Rather, they represent interconnected phases of a broader evaluative process. Only by integrating these three dimensions is it possible to obtain a comprehensive understanding of teacher training processes and their impact on inclusive education.

In inclusive education, this competence is particularly relevant, as teachers are constantly required to adapt their practices to diverse and evolving situations. Developing evaluation skills enables teachers to become reflective practitioners, capable of critically analysing their actions and of engaging in continuous improvement processes. In this sense, evaluation is not merely a tool for measuring training outcomes, but a resource for supporting professional growth, fostering reflective practice, and promoting more inclusive and effective teaching.

Notes

7.4 Evaluation Methods and Tools in Inclusive Contexts

Evaluation in inclusive education requires the integration of both quantitative and qualitative approaches in order to capture the complexity of learning processes and classroom dynamics. A variety of assessment tools can be used in inclusive educational contexts, each offering a different contribution to understanding students' experiences and learning processes (see Table 7.1). Quantitative methods, such as questionnaires, rating scales, and structured assessments, are useful for measuring variables such as attitudes, motivation, and perceived competence, and for identifying trends or changes over time. Qualitative methods, including interviews, open-ended questions, reflective journals, and narrative tools, allow for a deeper exploration of meanings, experiences, and perspectives. Systematic observation is particularly valuable for analysing participation, interaction, and engagement in real classroom situations, while sociometric techniques help reveal peer relationships and patterns of acceptance, rejection, or isolation. Finally, self-assessment and portfolio-based approaches actively involve students in the evaluation process, fostering reflection, autonomy, and awareness of learning pathways.

Table 7.1. Assessment tools commonly used in inclusive educational contexts

Methodological approach	Tool/method	What it assesses	Main contribution in inclusive contexts
Quantitative	Questionnaires, rating scales, structured assessments	Attitudes, motivation, perceived competence, beliefs, self-perceptions	Useful for measuring variables systematically, identifying trends, comparing groups or contexts, and monitoring change over time
Qualitative	Interviews, open-ended questions, reflective journals, narrative tools	Meanings, experiences, perceptions, personal interpretations	Allows in-depth exploration of participants' perspectives and gives voice to students and teachers
Observational	Systematic observation	Participation, classroom interaction, engagement, relational dynamics	Helps educators analyse behaviours and interactions in real contexts and identify barriers to inclusion
Relational/social network	Sociometric techniques	Peer relationships, acceptance, rejection, isolation, group positioning	Supports understanding of classroom social structures and helps design more inclusive group arrangements
Participatory/reflective	Self-assessment and portfolios	Self-reflection, learning processes, perceived progress, autonomy	Actively involves students in evaluation and promotes awareness, responsibility, and reflection on learning pathways

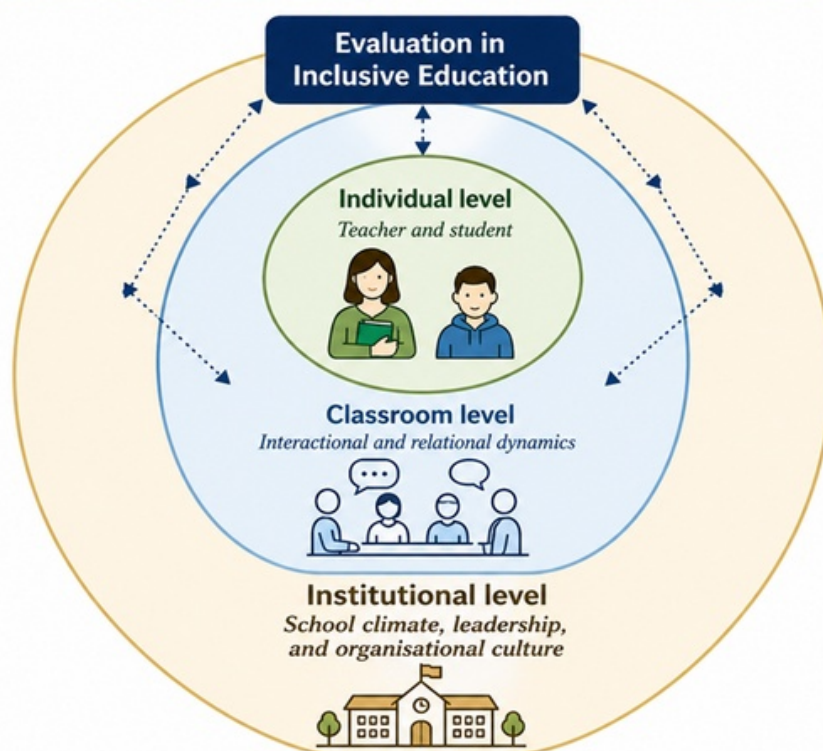
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Taken together, these tools contribute to a more comprehensive and inclusive approach to evaluation, moving beyond a narrow focus on performance and supporting the understanding of participation, relationships, and learning processes. Evaluation should be closely aligned with inclusive teaching approaches, such as differentiated instruction and Universal Design for Learning.

7.5 Evaluation as a Multi-Level Process

Evaluation in inclusive education cannot be reduced to a single dimension or level of analysis. Rather, it should be understood as a complex, multi-layered process that unfolds across interconnected systems within the school environment. In particular, evaluation involves at least three interdependent levels: the individual (teacher and student), the classroom (interactional and relational dynamics), and the institutional (school climate, leadership, and organisational culture). Considering these levels simultaneously allows for a more comprehensive and ecologically grounded understanding of how inclusion is actually enacted in everyday practice (McMaster, 2013; Bronfenbrenner, 1979).

Evaluation as a Multi-Layered Process in Inclusive Education



A comprehensive and ecologically grounded understanding of inclusion requires considering these levels simultaneously.

Adapted from Bronfenbrenner (1979) and McMaster (2013).

Figure 7.1: Understanding of inclusion (adapted from Bronfenbrenner (1979) and McMaster (2013))

From an individual perspective, evaluation focuses on teachers' professional competencies, beliefs, and attitudes toward inclusion, as well as students' experiences, participation, and sense of belonging.

However, these individual dimensions do not operate in isolation. As highlighted in recent literature, teacher readiness—understood as a combination of knowledge, skills, and attitudes—represents a key driver of inclusive practices and significantly influences student outcomes (Savolainen et al., 2012; Sharma et al., 2012). Moreover, empirical evidence shows that teachers' knowledge and attitudes are associated with broader educational processes, particularly through their contribution to the development of inclusive school environments. In this sense, evaluating inclusion requires examining how teacher-level variables translate into classroom practices and how these practices are perceived by students.

At the classroom level, evaluation shifts attention to relational and interactional processes. Inclusion becomes visible in the quality of peer relationships, patterns of participation, opportunities for collaboration, and the extent to which diversity is actively valued within daily activities. Observing these dynamics allows educators to move beyond abstract principles and assess whether inclusive intentions are effectively transformed into inclusive practices (Hoffmann et al., 2021; Ryan, 2006). Importantly, the classroom represents a mediating space in which individual teacher characteristics interact with broader institutional conditions.

At the institutional level, evaluation must consider the role of school climate as a collective and shared dimension. Inclusive school climate reflects the norms, values, and organisational practices that shape everyday life in schools, including leadership, collaboration, and shared responsibility for all learners (Ainscow & Sandill, 2010; Grazia & Molinari, 2021). Recent empirical studies adopting multilevel approaches demonstrate that school climate plays a crucial mediating role, linking teacher-level variables (such as knowledge and attitudes) with student-level outcomes, including attitudes toward inclusion and lived experiences of participation. This evidence suggests that inclusion is not solely dependent on individual teacher competence but is strongly influenced by the broader institutional environment in which teaching and learning take place (Thapa et al., 2013; Wang & Degol, 2016).

Adopting a multi-level perspective also implies recognising that inclusion is a co-constructed process, emerging from the interaction between actors, contexts, and systems. Students' experiences of inclusion are shaped not only by teacher practices but also by peer interactions, school norms, and leadership support (Freer, 2023; Gonzalez et al., 2023). In this sense, evaluation should not aim to isolate variables, but rather to understand the relationships between them, how teacher practices influence classroom dynamics, how these dynamics contribute to school climate, and how all these elements together shape students' perceptions and opportunities.

Furthermore, a multi-level approach to evaluation requires the involvement of multiple stakeholders. Teachers, students, school leaders, and families all provide complementary perspectives that contribute to a more comprehensive understanding of inclusion processes. This aligns with participatory and dialogical approaches to evaluation, which emphasise the importance of shared meaning-making and collective reflection (Stame, 2004; Booth & Ainscow, 2011).

7



7.6 Conclusion

Evaluation, when understood as a reflective and participatory process, becomes a powerful resource for professional growth and inclusive education. It allows teachers to analyse their practices, understand the complexity of educational contexts, and design more effective and inclusive learning experiences.

Rather than being a tool for control, evaluation should be seen as an opportunity to give value to educational processes, support learning, and promote continuous improvement. In inclusive education, this requires integrating quantitative and qualitative approaches, using diverse tools, and actively involving multiple stakeholders.

Furthermore, evaluation should be understood as a multi-level, continuous process that connects teacher professional development, classroom practices, and school contexts. In this way, it contributes not only to assessing what has been achieved, but also to guiding future actions and fostering more equitable and inclusive educational systems.

7.7 Summary

Evaluation is not merely a measure of outcomes, but a reflective journey that gives meaning to educational experiences and nurtures professional growth. Through dialogue, participation, and the integration of diverse perspectives, it becomes a living process that guides learning, inspires inclusive practices, and contributes to building more equitable and human-centered educational systems.



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Empowering Teachers' professional development in Inclusive Education through Learning Communities

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8.1 Introduction

As mentioned in chapter 1, with the ratification of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) member states have committed themselves to implementing “an inclusive education system at all levels” (Art. 24 (1), United Nations, 2006). This international agreement underscores the right of every learner to access quality education without discrimination, thereby fostering equitable opportunities for all. The UNESCO (2005, p. 13) further elaborates on the concept inclusion, defining it as

“a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children”

UNESCO (2005, p.13)



Figure 8.1: Research findings and evidence-based recommendations for inclusive education. Created with the assistance of AI (ChatGPT).

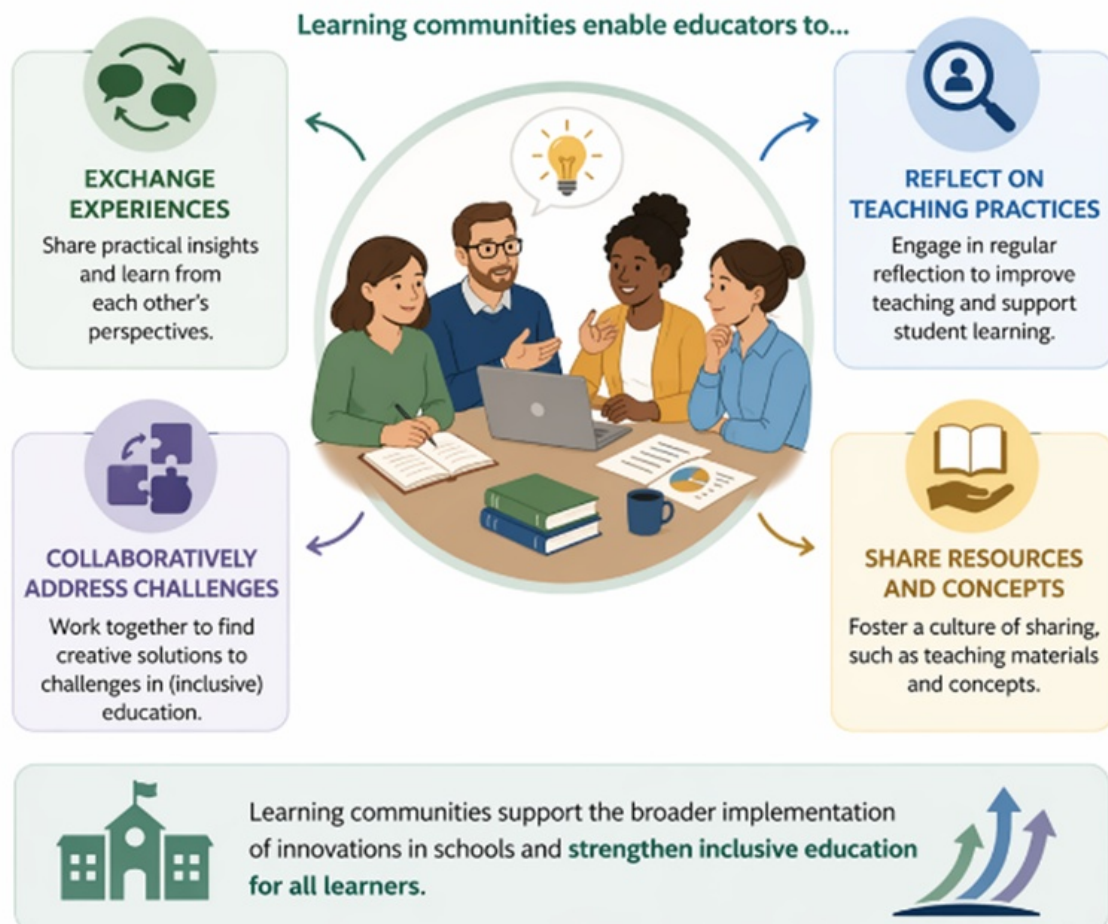
8.2 Bridging Research and Practice: Empowering Teachers' professional development in Inclusive Education through Learning Communities

Professionalisation in inclusive education extends far beyond the acquisition of subject-specific knowledge or isolated training sessions. Research consistently shows that sustainable professional development thrives when teachers engage in continuous, collaborative processes of exchange and reflection within a group setting (Berkemeyer et al., 2011; Kunze & Reh, 2020; Ng, 2025). Networks and learning communities therefore provide a central collaborative framework, enabling collegial learning, shared reflection, and cooperative problem-solving (Cleary et al., 2023; Dautova et al., 2020; Stoll et al., 2006; Vescio et al., 2008).

What is a Learning Community?



A learning community is a structured group of educators who regularly come together to **exchange experiences**, **reflect on teaching practices**, and **collaboratively address challenges** in (inclusive) education.



(Bankhofer & Fuchs, 2022; Gräsel et al., 2006)

Figure 8.2: What is a Learning Community? Created with the assistance of AI (ChatGPT).

8.2.1 Benefits of teacher networks

Participating in learning communities yields multiple benefits:

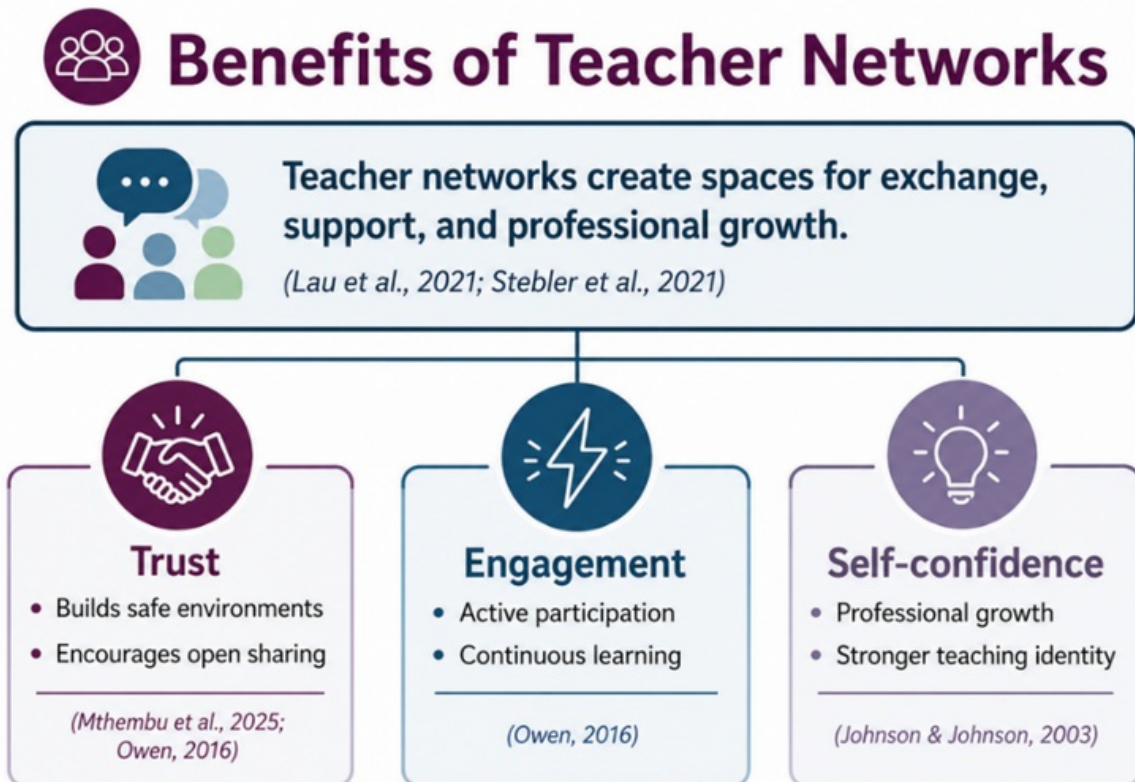


Figure 8.3: Benefits of Teacher Networks. Generated with assistance of AI (ChatGPT).

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In the field of inclusive education, learning communities are particularly relevant, as collaboration enables teachers to effectively address the challenges of developing inclusive teaching practices (Włodarczyk, 2013). The diversity of perspectives and experiences within these networks:

- enriches inclusive classroom practice (Heinz et al., 2025),
- fosters the development of new ideas, and
- encourages critical reflection on established practices.

In this way, learning communities not only enhance subject-specific and pedagogical competences, but also cultivate essential professional attitudes such as openness, reflective capacity, and a sense of shared responsibility (Stoll et al., 2006; Vangrieken et al., 2017). Networks thus act as vital support structures, empowering teachers to sustainably meet the demands of inclusive education and to confidently shape their professional role with a strong sense of agency.



Takeaway Learning Communities

Learning communities are a powerful approach to fostering teachers' professional development in inclusive education.

8.2.2 Practical Tips to Ensure the Effectiveness of a Network

Practical Tips to Ensure the Effectiveness of a Network



To ensure the effectiveness of networking, research recommends the following practical tips:



1. REGULAR MEETINGS

Hold meetings ideally **two to three times per semester**, each lasting approximately **two (school) hours**.



This consistent rhythm provides sufficient time for in-depth discussion and reflection without overwhelming participants.



2. OPTIMAL GROUP SIZE

Organize groups of about **five to ten participants**.

5–10



3. DIVERSE COMPOSITION

Compose groups with attention to **diversity** in experience and background.



Diversity enriches discussions and fosters innovative solutions.



4. PURPOSE AND BENEFITS



Supports the practical exchange of ideas and resources.



Creates an environment where all members feel valued and heard.



Ultimately enhances the collective learning experience and the development of inclusive teaching practices.



By following these practical tips—**regular meetings, optimal group size, diverse composition, and a clear purpose**—networks can thrive and make a meaningful impact on teaching practice and learning outcomes.



REFERENCES

(Hartmann et al., 2025; He et al., 2025; Hendrickx et al., 2025; Mahmood et al., 2024; Tanghe et al., 2024).

Figure 8.4: Practical tips to ensure the effectiveness of a network. Generated with the assistance of AI (ChatGPT).

8.3 From Idea to Practice: Establishing Learning Communities for Inclusive Teaching through the EQui-T Network

Building on these insights, the EQui-T project creates opportunities for educators to connect with colleagues and other educational professionals through the creation of (inter-)national networks and organised study visits. These activities enable the exchange of good practices, shared experiences, mutual learning, and the joint development of teaching materials for inclusive classrooms, while also providing space for pedagogical reflection and professional dialogue – thereby supporting teachers’ ongoing professional development.

In doing so, the EQui-T project has developed and implemented a structured approach to support the establishment of learning communities across different European countries. In particular, three interconnected core elements were implemented: (1) national networks, (2) an international network, and (3) study visits to inclusive schools. Together, these elements were designed to create opportunities for meaningful exchange, mutual learning, and the collaborative development of inclusive teaching practices.

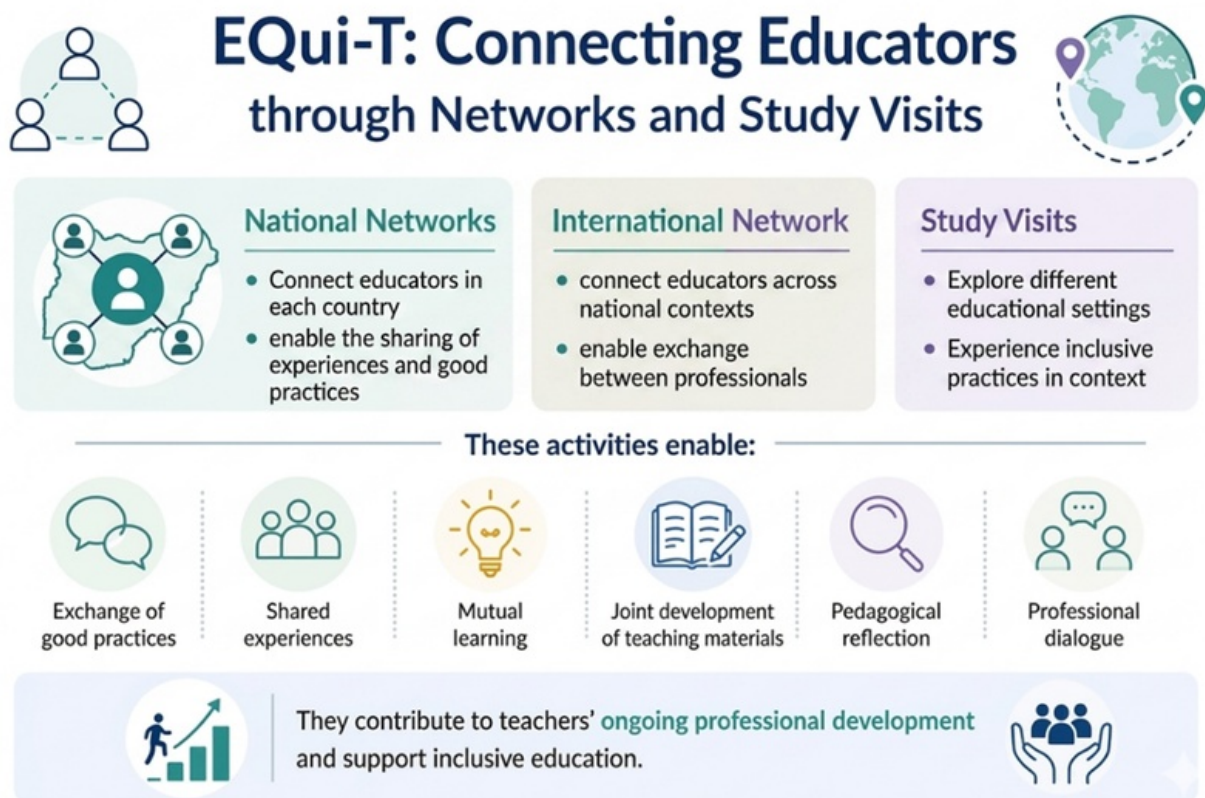


Figure 8.5: Core elements for connecting educators. Created with the assistance of AI (Gemini).



Before these core elements could be implemented, important preparatory steps were necessary to ensure the successful establishment of the networks:

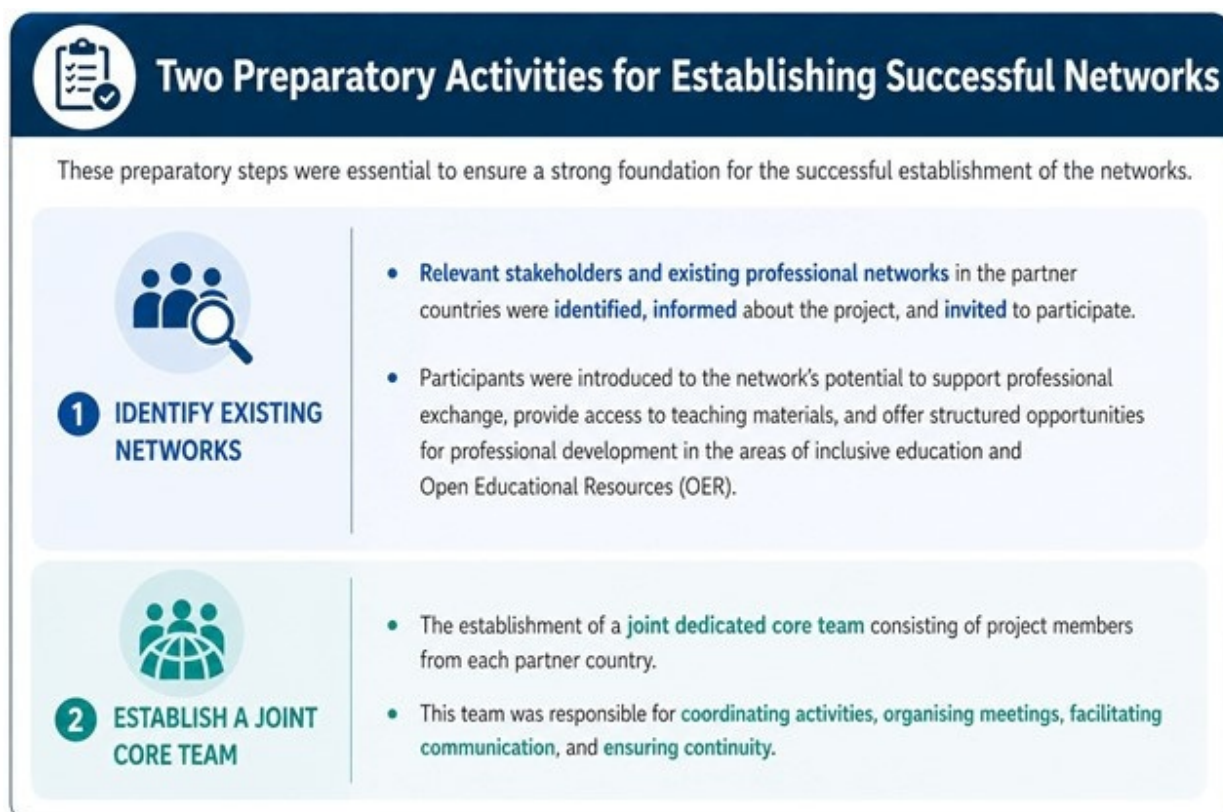


Figure 8.6: Preparatory Activities for Establishing Successful Networks. Generated with the assistance of AI (ChatGPT).

8.3.1 National Networks

A central pillar of the EQui-T project was the establishment of one national networks per partner country. These networks form the basis of the project's professional learning communities and bring together a diverse group of participants, including teachers, school leaders, teacher educators, and other stakeholders working in the fields of inclusive education, digital learning, and Open Educational Resources (OER). By intentionally connecting professionals with diverse backgrounds and experiences, the national networks create a broad knowledge base that reflects classroom realities, professional expertise, and systemic perspectives. Thus, they provide a structured framework for continuous professional development at the intersection of inclusion and digitalisation.

The thematic focus of the network activities lies in inclusive, digitally supported education and the professionalisation of teachers in the field of inclusive education. In this context, particular emphasis is placed on the pedagogically meaningful integration of digital tools, as well as on the use, evaluation, and adaptation of OER to address the diverse needs of learners. The networks aim to support participants in developing inclusive teaching practices that effectively combine pedagogical, digital, and collaborative approaches.

The national networks met two to three times per semester. These meetings were conceptualised to balance structured professional development with opportunities for professional exchange, mutual learning, and networking. Therefore, each meeting was designed as an interactive, collaborative professional learning space. Typical formats included short expert inputs, hands-on working phases, peer exchange and feedback, as well as guided reflection. This structure positions participants not as passive recipients of knowledge, but as active co-constructors of shared expertise who contribute to shaping the network’s direction and priorities.

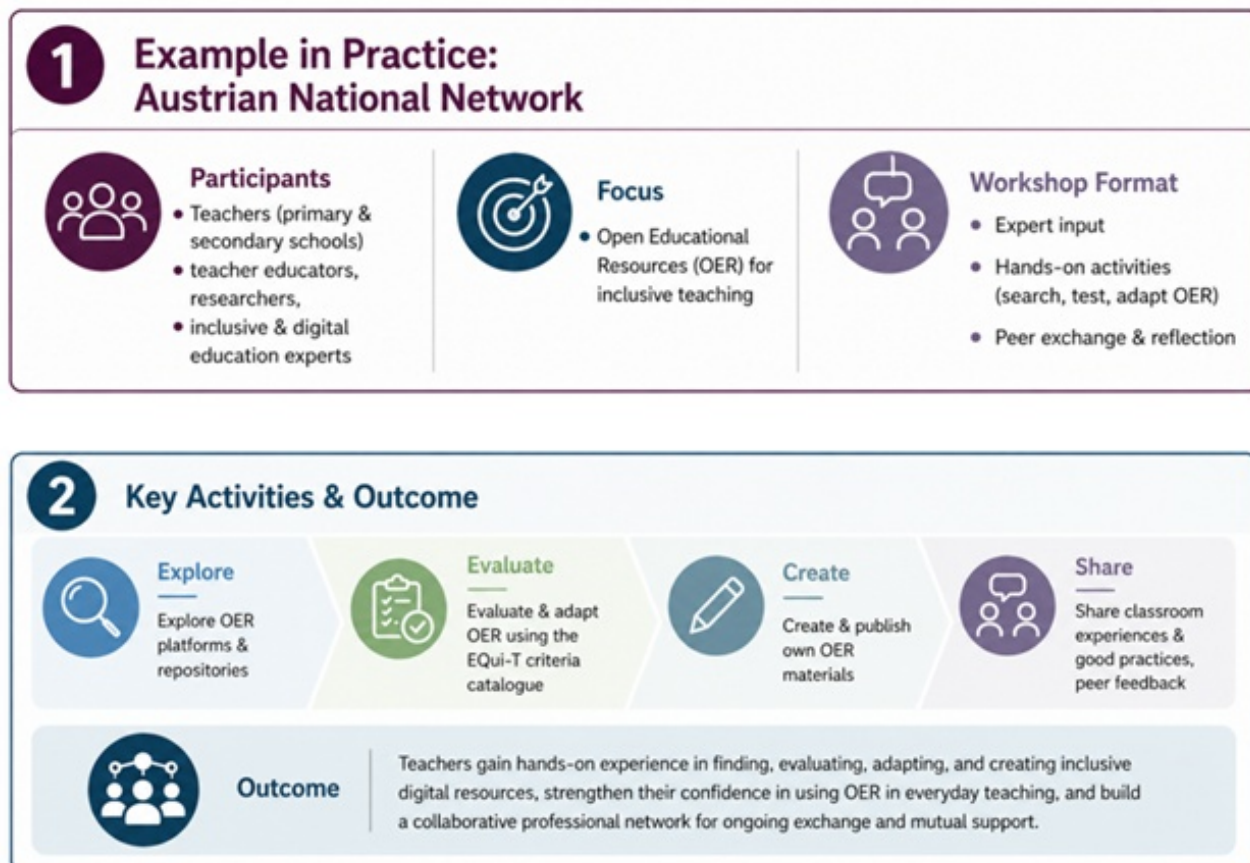


Figure 8.7: Practical example of the Austrian national network. Created with the assistance of AI (Gemini).

8.3.2 International Network: Professional Learning across Europe

To complement the national networks, the EQuiT project established an international network connecting educators and stakeholders across Europe. While national networks address country-specific contexts, the international network broadened perspectives, encouraged comparative reflection, and supported the development of shared European approaches to inclusive, accessible, and high-quality digital teaching.

The network brought together teachers, teacher educators, researchers, and other (educational) stakeholders from all five partner countries. Participants met online every two to three months, focussing on a variety of themes ranging from inclusive teaching with digital tools and assistive technologies, and using artificial intelligence to support teaching and learning, to issues of educational (in)equity. Overall, these topics addressed key challenges in professional development for inclusive, digitally supported education. Each meeting followed a structured format:

THE STRUCTURED FORMAT OF EACH MEETING

Each meeting follows a clear sequence of stages that combine **inspiration**, **practical exchange**, and **shared learning**.



Figure 8.8: Structured format of each meeting. Created with the assistance of AI (ChatGPT).

By facilitating regular transnational exchange, the international network aimed to share experiences and good practices in inclusive digital teaching, critically discuss the opportunities and challenges of digitalisation, and collaboratively address educational challenges. A particular focus was placed on reflecting on teaching materials, inclusive tools, and digital learning environments. In doing so, the network contributed to fostering a shared European understanding of quality in OER and thus, in inclusive digital-supported education.

Through expert input, collaborative reflection, and practical exchange, participants developed their professional knowledge and practical skills, and gained valuable comparative insights into different countries. This allowed them to adopt innovative approaches in their own classrooms. Beyond individual growth, the network fostered a sense of a European professional community, encouraging ongoing collaboration and mutual support among educators.

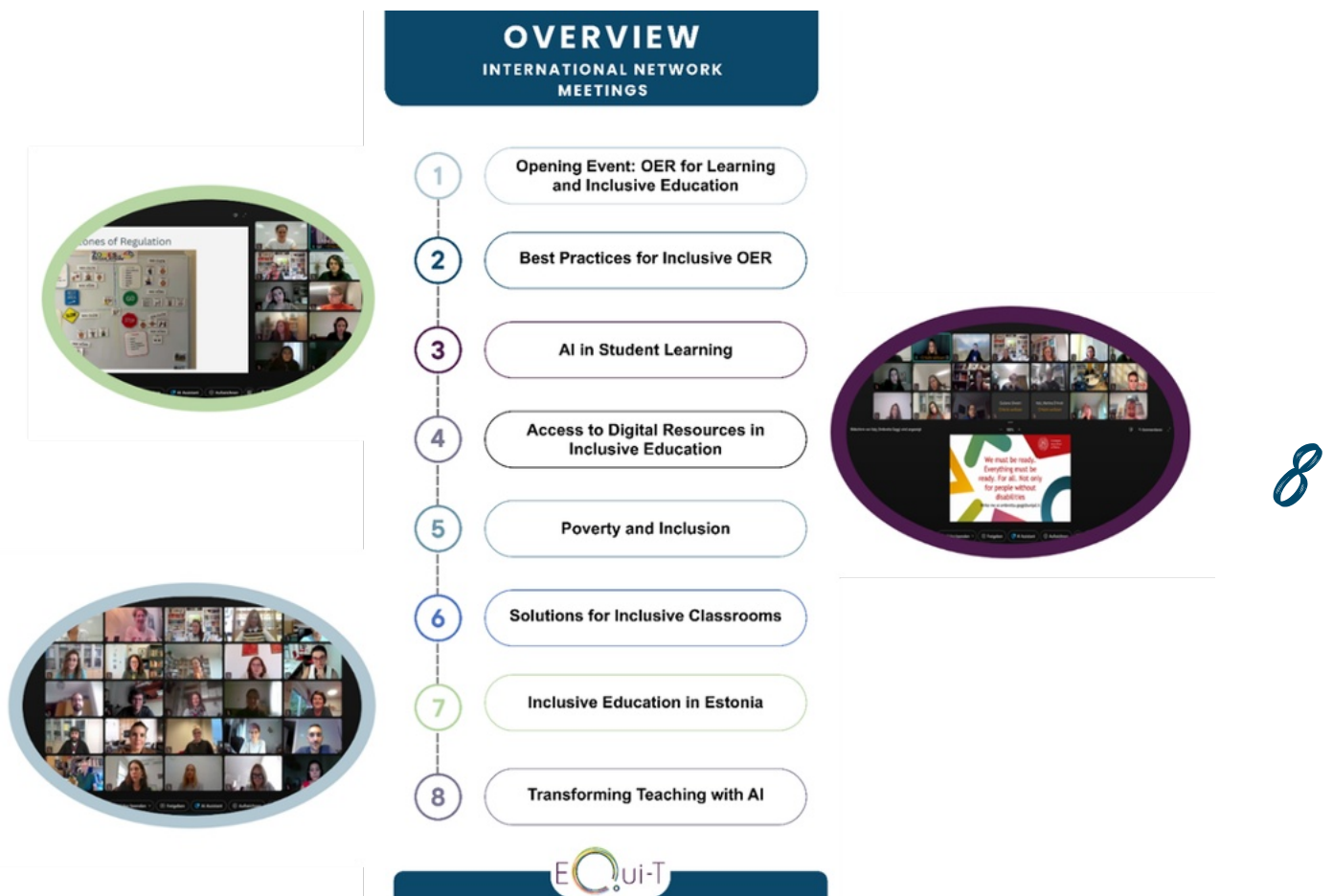


Figure 8.9: Overview of the international network meetings topics. Created with the assistance of AI (Gemini).

8.3.3 Study Visits: Experiencing inclusive practices

Study visits represented a central component of the EQui-T network, as they extended professional learning beyond online exchange and enabled direct engagement with inclusive education in real school settings. By visiting primary and secondary schools in different European countries, participants gained insight into diverse school cultures, organisational structures, and approaches to inclusive, digitally supported teaching. This first-hand experience allowed them to observe how inclusive practices, digital tools, and assistive technologies are implemented in everyday classroom situations.

Typically conducted over several days, study visits combined:

- classroom observations,
- opportunities for active participation in lessons, and
- structured dialogue with school leaders, teachers, and teachers for inclusive education.

Participants were introduced to local support systems and inclusion services and engaged in guided reflection sessions that connected their observations to their own professional contexts. They were encouraged not only to observe, but also to ask questions, compare practices, and critically reflect on how observed strategies can be adapted to their own schools.

Takeaway Study Visits

With around five participants per country taking part in each visit, study visits created an intensive and collaborative learning environment. At the same time, they played an important role in strengthening the network by fostering personal connections, building trust, and reinforcing a shared sense of professional community. Through the combination of observation, dialogue, and reflection, study visits provide a powerful form of experiential learning that bridges theory, research, and classroom practice, and inspires participants to further develop inclusive teaching in their own educational contexts.




The study visits also contributed to:

- Strengthening of professional networks through personal connections and trust-building
- Development of a shared sense of professional community
- Experiential learning through the combination of observation, dialogue, and reflection
- Bridging theory, research, and classroom practice in a meaningful way
- Inspiration and motivation to further develop inclusive teaching in participants' own educational contexts

Examples of the study visits are shown in the following infographics.

Study Visit in Graz (Austria)



WHEN & WHERE
30–31 January 2025, Graz

PARTICIPANTS
Teachers, researchers, and education experts from European partner countries

SCHOOL VISITS

- Two primary schools
- Classroom observations & discussions with teachers and school leaders
- Focus on differentiation, collaboration, and supportive technologies

OUTCOME
Participants connected theory, network exchange, and classroom practice, gaining practical ideas and inspiration for implementing inclusive, digitally supported teaching in their own contexts.

HIGHLIGHT: DIGITAL LEARNING LAB FOR INCLUSION

- Exploration of digital tools & assistive technologies (incl. AAC)
- Hands-on experience (e.g. eye-tracking applications)
- Insight into how technology supports participation

LEARNING APPROACH

- Guided reflection linking observations to own practice
- Exchange of experiences and perspectives
- Informal networking (e.g. joint dinner)

KEY INSIGHTS
Accessibility, flexibility, and collaborative problem-solving as shared principles of inclusive education

Figure 8.10: Overview Study Visit in Graz. Created with the assistance of AI (ChatGPT).

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Study Visit in Padova (Italy)



WHEN & WHERE

5–6 February 2026, Padova



PARTICIPANTS

Teachers, researchers, and education experts from European partner countries



SCHOOL VISITS

- Visits to primary and secondary schools
- Classroom observations & discussions with teachers and school leaders
- Focus on digital tools and assistive technologies for inclusive learning



LEARNING APPROACH

- Structured reflection linking observations to participants' contexts
- Exchange on similarities and differences between national systems
- Informal networking and community building



INPUT

- Inclusive policies and support structures in higher education
- Italian education system
- Practitioner insights into inclusive early childhood education
- International dialogue



KEY INSIGHTS

Early intervention, interdisciplinary collaboration, and a whole-school approach as key principles of inclusive education



OUTCOME

Participants gained new perspectives on inclusive education across different system levels, connected policy, research, and practice, and strengthened their commitment to advancing inclusive, digitally supported teaching in their own contexts.



Figure 8.11: Overview Study Visit in Padua. Created with the assistance of AI (ChatGPT).

8.3.4 Evaluating Impact: Strengthening Professional Learning through the EQui-T Network

To assess the effectiveness of the EQui-T network activities, evaluations were conducted following national and international network meetings as well as study visits. Overall, the results indicate a high level of acceptance and perceived relevance among participants. This highlights the success of the network in supporting professional learning in inclusive, digitally supported education.

"Useful tools for everyday practice – they really do exist!"

Participants consistently emphasised the strong practical relevance of the topics addressed.

"I've seen how inclusive education fosters a diverse learning environment where all students benefit from different perspectives, promoting fairness and social skills [...]"

Both national and international network meetings were perceived as closely aligned with classroom realities and professional needs.

In particular, the combination of expert input, collaborative exchange, and hands-on elements was valued as supportive for connecting theoretical concepts with everyday teaching practice.

"Exchanging ideas with colleagues across national borders is always enriching."

The evaluation further shows that participation in the network

- contributed to a deepened understanding of inclusive education,
- strengthened awareness of inclusive teaching practices,
- broadened their perspectives, and
- provided new ideas for addressing diversity in the classroom.

It was "enriching to meet other people and know other ways of teaching"

"[...] lots of new ideas and inspiration for my teaching work [...], which I hope to incorporate into my day-to-day work in the future."

At the same time, the focus on Open Educational Resources (OER) and digital tools enabled teachers to gain confidence in selecting, evaluating, and adapting teaching materials for diverse learners. Evaluation results further indicate that participants expanded their knowledge of quality criteria for OER and felt more confident in assessing their quality for inclusive teaching. In addition, they reported gaining practical ideas and useful input for integrating OER into their own practice.

Importantly, the findings also point to a successful transfer of learning into practice.

Participants highlighted that they were able to take away concrete strategies, digital resources, and practical ideas that could be directly implemented in their own teaching contexts. Study visits reinforced these outcomes by providing authentic insights into inclusive classroom practice, which were perceived as particularly valuable and inspiring.

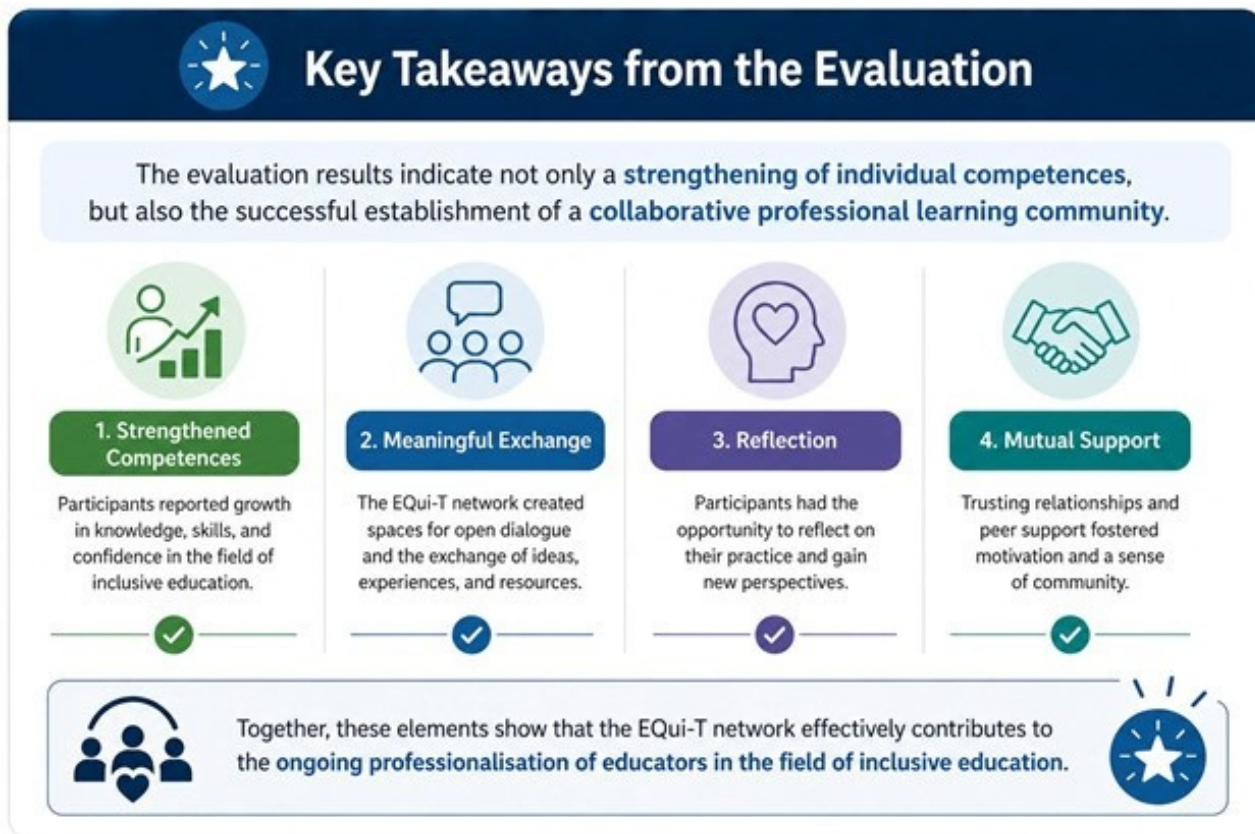



Figure 8.12: Key Takeaways from the Evaluation. Created with the assistance of AI (ChatGPT).



8.4 Conclusion

Inclusive and equitable education as a human right requires teachers to adapt teaching and learning materials to address the learning needs in increasingly diverse classrooms, ensuring meaningful participation for all learners. At the same time, many educators report uncertainty in dealing with heterogeneity and a lack of sufficient knowledge, particularly when it comes to integrating innovative approaches and digital resources into their teaching. In this sense, the networks contribute to expanding teachers' professional repertoire and strengthening their sense of professional agency. Even though Open Educational Resources (OER) have great potential for inclusive teaching and learning, many teachers still lack the competences and confidence to effectively select, adapt, and create inclusive teaching materials. In this context, teacher professionalisation emerges as a key factor for the successful realisation of inclusive education, requiring continuous, practice-oriented, and reflective learning processes within a group setting. In particular, learning communities provide essential spaces for exchange, reflection, and joint problem-solving, enabling teachers to learn from each other and advance their practice collaboratively.

 The EQuI-T project addresses these challenges by linking professional development, with collaborative learning and networking. It aims to equip teachers with the necessary skills to overcome these gaps using a structured network approach consisting of three interconnected elements to establish learning communities for inclusive teaching:

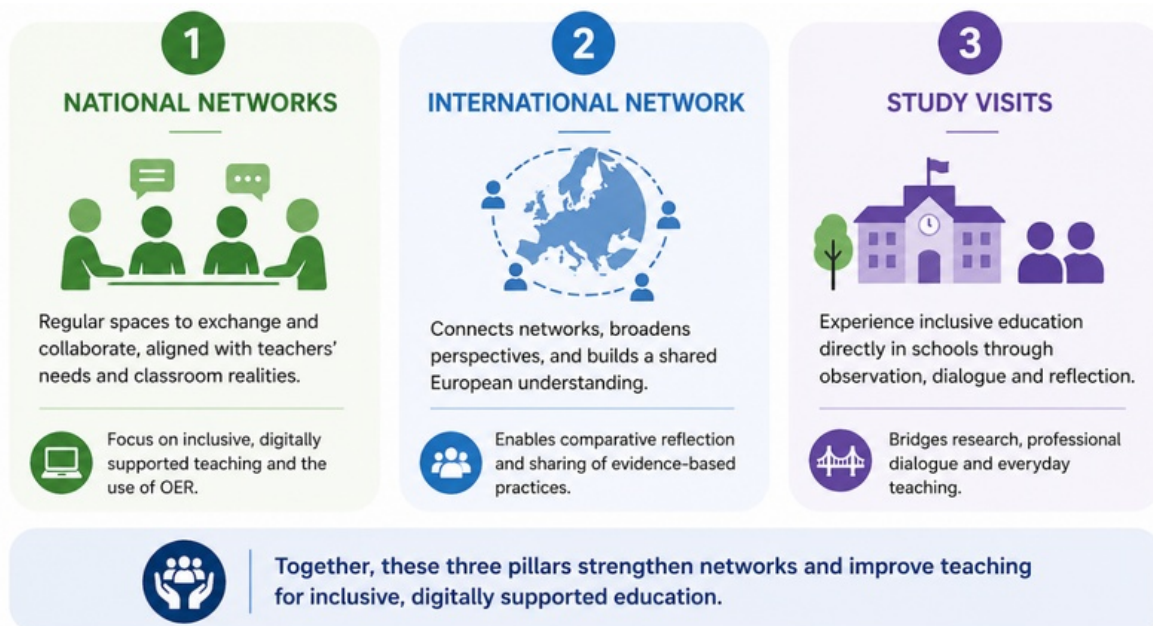
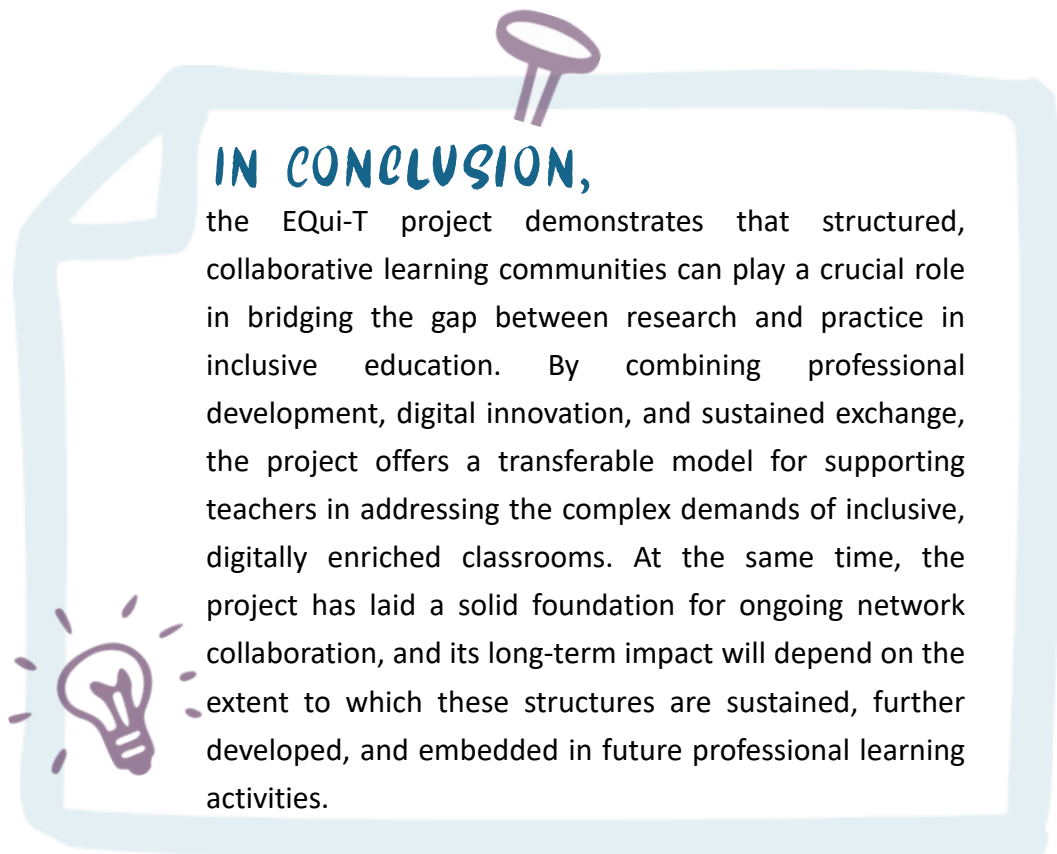


Figure 8.13: Three interconnected elements to establish learning communities for inclusive teaching. Generated with assistance of AI (ChatGPT).

As the evaluation results show, EQuI-T network activities contributed significantly to both individual and collective professional development. They were perceived as highly relevant to teachers' everyday practice and provided concrete support for inclusive, digitally supported teaching. Participants gained valuable perspectives, practical tools, and increased confidence in implementing inclusive strategies. At the same time, they deepened their understanding of inclusive education, strengthened their awareness, and motivation, and developed more reflective and collaborative professional practices. The combination of structured input, practical application, and continuous exchange within a collaborative setting proved to be a key factor in enabling the transfer of knowledge into practice. Through collaborative reflection and joint work on teaching materials, participants developed a stronger sense of professional agency and increased confidence in designing inclusive learning environments.

At the same time, the project also highlighted important challenges in establishing and sustaining such learning communities. Ensuring consistent participation remained demanding, as fluctuating attendance affected group dynamics and continuity. Striking a balance in the frequency and intensity of meetings also proved crucial: while overly frequent meetings risk increasing workload, rare interaction may weaken engagement and limit impact. In addition, questions of long-term sustainability remain central, particularly regarding the continued coordination of networks beyond the project's duration. These challenges underline that successful professional learning communities require not only strong pedagogical design but also stable organisational structures and long-term commitment.



8.5 Summary

This chapter shows how teachers can be supported in inclusive education.

Inclusive education means that all children and people can participate equally. Diversity is valued, and a sense of belonging is encouraged.

Teachers learn effectively together in so-called learning communities. These are groups in which they exchange experiences, reflect on their teaching, and develop new ideas.

Building on these findings, three key components were implemented within the EQui-T project to strengthen teachers in inclusive education:

- Establishing **national networks**: Regular meetings of teachers, school leaders, and other professionals within a country on topics such as inclusive education, digital media, and teaching materials.
- Establishing an **international network**: Online exchange between teachers from different European countries on inclusive education, open educational resources, digital technologies, and AI.
- **Study visits**: School visits in Austria and Italy involving classroom observations and exchanges on inclusive teaching practices.

Despite challenges such as scheduling the network meetings, the evaluation showed many positive results. Teachers gained greater confidence in dealing with diversity, became familiar with new digital tools, and were able to apply many ideas directly in their teaching.



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