



D2.5 Guidelines for inclusive digital education platforms



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Executive Summary

This handbook was developed to help educators make digital courses more inclusive in real, practical terms. It is meant to be used while designing a course, running it, or reviewing it afterwards. The idea was not to produce another text that talks about inclusion in broad or abstract terms, **but to offer something more usable: guidance that can support everyday teaching decisions.**

The handbook builds on earlier work carried out in the project, [work on inclusive communication](#) and [evaluating digital learning environments](#).

One key idea runs through the whole text. **Inclusive digital education is not just about meeting accessibility requirements.** Those requirements matter, but they do not cover everything that affects a learner's experience. In online and blended learning, learners differ in simple but important ways. Some need clearer instructions, while others more stable structure. Some are comfortable with digital platforms from the start, while others need more time to get used to them. Some can handle a lot of information easily; others struggle when too much appears at once. None of this is unusual; it simply reflects the wide range of experiences found in education and training.

For this reason, the handbook treats inclusion as part of course planning from the beginning, not as a response to problems after they appear. Instead of long theoretical discussion, it offers short explanations, structured guidance, tables, and tools that educators can use when planning materials, organising activities, communicating expectations, or thinking about assessment.

The document is divided into six sections. It begins with **the main ideas behind inclusive digital education**, including accessibility, usability, cognitive clarity, and ethical awareness. It then looks **at learner diversity and the kinds of barriers** that come up in digital environments. The later sections cover **course design, teaching and communication strategies**, and assessment. The final part brings together **five practical tools** intended for direct use.

Across these sections, **five principles appear repeatedly: clarity, predictability, flexibility, accessibility, and reflective practice.** These are used as reference points for making decisions, not just as general values.

1. Introduction

1.1 Purpose of the Handbook

This handbook for Educators has been developed to support educators in designing, delivering, and evaluating inclusive digital learning courses.

The guidance in this document is based on findings from the [work on inclusive communication](#) and [evaluation report on digital learning environments](#).

Guidelines, and the modular architecture adopted in the project (TB1–TB3¹). This means that the recommendations are grounded in project evidence.

Within the scope of the *inclusive digital platforms* deliverable, this handbook adopts a clear position: inclusion in digital learning requires the combined consideration of multiple dimensions, including **platform infrastructure**, **content design**, and **pedagogical practices** (Ramírez-Montoya et al., 2024).

Inclusive digital education should not be treated as a specialised intervention for specific groups of learners, but as a design approach embedded from the outset in the structure, content and delivery of learning experiences.

1.2 Target Audience

This handbook is intended for:

- Adult educators, trainers and facilitators
- Course designers working in formal, non-formal and blended contexts

The framework can be adapted to different educational settings where digital learning plays a central role.

The guidance assumes that educators may have different levels of technical expertise. For this reason, **the focus is on clear structure, communication, and instructional coherence rather than advanced technological knowledge.**

1.3 How to Use This Manual

The handbook can be read from beginning to end, moving from core principles to implementation and assessment. It can also be used as a reference, dipping into specific sections as needed.

- **Sections 2–4** focus on design decisions before a course begins.

¹ TB1–TB3 refers to the Training Blocks defined within the ADEDU curriculum. These blocks organise the programme's modules into broader thematic units and support consistency across learning outcomes, activities and assessment.

- **Section 5** addresses inclusive teaching practices during delivery.
- **Section 6** covers assessment and feedback.

Readers can go directly to the section most relevant to their needs. For example, educators revising assessment formats may start with Section 6, while those redesigning a course structure may begin with Sections 2–4.

2. Foundations of Inclusive Digital Education

2.1 Understanding Inclusion in Digital Contexts

In digital learning environments learners are often expected to work more independently and rely heavily on written instructions, course structure, and online navigation. For this reason, inclusion should not be seen relevant only to a small number of learners. It makes more sense to treat it as part of course design.

In practice, that means thinking ahead. **Courses are easier to follow when their structure is clear, when expectations are stated in plain language, and when tasks are broken into manageable steps.** Inclusive design is not only about responding when learners become confused. Very often, it is about noticing in advance where confusion is likely to arise and reducing it before it builds up. Small choices matter more than they sometimes seem to. **Repeating key information, keeping module layouts consistent, and making important instructions easy to spot can all make a course feel easier to navigate.**

It is also worth thinking carefully about what accessibility really means. Meeting formal accessibility standards is important, but it does not automatically make a course will be easy to use or easy to follow. A course can meet all technical requirements and still feel dense, tiring, or hard to navigate. Questions such as the following can help identify potential barriers early:

- Is it clear where learners should begin?
- Can they find deadlines without having to search?
- Do they understand what is expected at each stage? Are there different ways to engage with the material when needed?

These are not minor presentational issues. They shape whether learners feel able to participate in a steady and realistic way.

Seen from this angle, inclusive design is not an extra layer added after the teaching has already been planned. It is part of the teaching itself. It influences how a course communicates with learners, how it guides them, and how much unnecessary effort it asks of them before learning even begins. When a course is clear and consistent, learners spend less energy trying to work out how everything fits together, and focus more on the learning.

2.2 Accessibility and Usability as Core Principles

Accessibility and usability both matter in inclusive digital education, but they are not the same thing, even if they are often treated as though they were.

Accessibility is about whether learners can reach and perceive the content at all, regardless of physical, sensory, or learning differences. Usability is about what happens after that. Can learners move through the course without getting lost? Do they understand how it is organised? Can they interact with materials and tasks without spending unnecessary effort on the interface itself?

That is why both accessibility and usability need attention from the beginning, not as an afterthought (Lomellini et al., 2025). When educators treat these two areas as part of course design from the beginning, the result is usually a learning environment that feels clearer, steadier, and easier to navigate

This became especially clear during the evaluation of the All Digital Academy platform. The evaluation combined expert review and user testing, based on the principle that good accessibility assessment should include both specialist expertise and the experience of users. In practice, this meant a mixed involving heuristic evaluation by experts, task-based testing with users, and usability measurement through the System Usability Scale. The findings were used to guide further improvements so that the platform could better serve its target audience.

Accessibility is sometimes seen as a matter of technical compliance, but in teaching practice it often comes down to very ordinary choices:

- Is the text readable?
- Are headings doing the job they are supposed to do?
- Is the contrast comfortable enough for sustained reading?
- Can learners find essential information in more than one form?

These may seem like small points, but they affect how approachable a course feels. The same applies for captions, transcripts, clearly labelled links, and documents that follow a logical structure. None of this is especially complicated. It usually comes down to care, consistency, and a willingness to look at the course not only as its designer, but as someone trying to make their way through it.

Usability is tied closely to how the course is put together. When learners have to search through different sections to find basic information, or when one module

looks nothing like the next, some of their effort goes into figuring out the course rather than engaging with the subject. Educators do not always notice this, partly because they already know where everything is. Learners do not. And for learners who have difficulties with attention, processing, or organisation, these small interruptions can add up quickly.

A consistent pattern helps. **If each module follows a familiar structure, learners do not have to start from scratch every time they open a new section.** They know roughly where to look, what comes next, and how the pieces fit together. This does more than make the course feel tidy, it reduces unnecessary effort. In that sense, usability is not just about convenience. It directly supports learning by leaving more room for concentration and engagement.

Many barriers in digital learning work in this way. **They do not always appear as obvious failures.** More often, they grow out of repeated small problems: long blocks of text, inconsistent file names, unclear deadlines, announcements scattered without a clear pattern, pages that feel crowded for no good reason.

2.3 Accessibility Quick Audit Tool

Even when educators are aware of accessibility principles, practical pressures, such as time constraints or platform complexity, can lead to oversights. For this reason, a brief and structured accessibility check before publishing or updating course material can be very useful.

An accessibility review does not need to be complicated. In most cases, a short check of formatting, structure and multimedia elements is enough to prevent recurring difficulties. **When accessibility becomes part of routine course preparation, it feels like a normal teaching practice rather than an extra task.** The following tool is designed to be used quickly and consistently, especially before a course begins new material released.

The checklist named draws on widely established accessibility and usability principles, including web accessibility guidelines (W3C, 2021), usability research (Nielsen, 1993), and multimedia learning principles that emphasise clarity and cognitive manageability in digital environments (Johnson & Mayer, 2009). Accessibility should not be treated as a one-time checklist.

As courses develop, with new materials added and activities adjusted, accessibility should be revisited. Making this short audit a regular habit supports consistency and reinforces the broader aim of inclusive design: reducing

unnecessary obstacles so that learners can concentrate on learning, rather than on navigating avoidable difficulties.

2.4 Designing for Cognitive Clarity

Designing for cognitive clarity, means organising the learning journey in a way that makes sense to learners. In digital spaces, learners are often working on their own, relying on written instructions, course structure, and their ability to find their way around. When information feels dense, scattered, or is hard to follow, learners can quickly lose their sense of direction. In many cases, the difficulty is not the content itself, but the way it is structured and presented. Getting organisation right is just as important as the explanation itself.

One of the biggest challenges in online education is cognitive overload. When learners are expected to process too much information at once, or to move across multiple sections just to find an assignment, unnecessary mental effort is created. This is matters especially in digital courses, where distractions are constant and immediate help may not be available. By reducing unnecessary clutter, educators can help learners focus on the actual rather than trying to decode unclear expectations.

Improving cognitive clarity does not require a complete redesign. Often, simply make a big difference. Breaking instructions into smaller steps, separating essential information from background reading, and keeping headings consistent from one module to the next can all make learning more manageable. Grouping related topics and avoiding the introduction of too many new ideas at once can also help learners stay focused. This is not about reducing academic rigor; it is about presenting content in a way that allows learners to engage with it more effectively.

Predictability is another important element. When each module follows a familiar pattern, learners know what to expect. They do not have to spend time reorienting themselves and can focus more directly on the learning. repeatedly trying to reorient themselves and can focus more directly on the material. Repeating key structural elements, such as placing learning outcomes in the same location or using a standard format for weekly tasks, builds a sense of stability.

The language used in digital courses also matters. Long, complex sentences and unclear expectations can easily cause frustration. Using plain, direct language is important. When educators are clear about what needs to be submitted, in what format, and by when, they reduce confusion. When expectations are visible and concrete, learners are better able to manage their own effort.

Designing for clarity does not mean avoiding complex ideas. Subjects should remain intellectually challenging. The goal is not to reduce the depth of the course, but to remove avoidable structural obstacles. When learners do not have to spend mental energy decoding confusing instructions, they can use that energy to engage more fully with the material and develop their skills.

A useful question to ask is: “Is the difficulty here coming from the subject itself, or from the way the material has been presented?” When design is clear and logical, learners experience challenge as a natural part of learning not as a result of structural confusion. Cognitive clarity supports both inclusion and the overall quality of the course.

2.5 Digital Ethics and Data Awareness in Online Teaching

2.5.1 Building Trust in the Virtual Classroom

Digital ethics and data awareness are often treated as technical background concerns or administrative requirements. In practice, however, they are central to the online learning experience. Every time an educator selects a digital tool, organises a discussion, or manages an assessment, they are shaping the safety, fairness, and inclusivity of the learning environment.

Ethical online teaching goes well beyond meeting compliance requirements. It is about **responsible stewardship**: respecting personal boundaries, handling information with care, and fostering an environment where every learner feels secure enough to participate (Sari et al., 2020; Şeşen, 2021).

2.5.2 Why Ethics Matter for Inclusion

Online learning environments are never neutral. The way digital tools are designed and used can either support or unintentionally limit participation. When learners feel that their activity is being monitored without a clear purpose, or that their personal data may be exposed, they are more likely to disengage from the learning process.

Research shows that perceptions of digital security are closely linked to learners’ willingness to participate and express themselves (Çubukçu & Bayzan, 2013; Kaluarachchi et al., 2020). In environments where trust is low, learners may avoid interaction, limit their contributions, or withdraw. Digital ethics is therefore a core component of inclusion. If learners do not feel that they have the control over how their data is used, they cannot fully engage in the learning process.

For this reason, ethical practices—such as transparency in data use, clarity in expectations, and respect for learner autonomy—are not peripheral

considerations, but essential conditions for inclusive and effective digital learning.

2.5.3 The Educator’s Role (No Tech Degree Required)

Educators do not need to be a technical specialist to act responsibly. What matters is being thoughtful and intentional.

Many educators feel underprepared in this area (Novella-García & Cloquell-Lozano, 2021). It is worth remembering that just because a tool offers advanced analytics or automated tracking doesn't mean it is educationally sound. **The learner's needs should always come before the capabilities of the software.**

2.5.4 Cultivating Trust through Ethics

In a digital setting, where written words can be misread and physical distance can create a sense of isolation, ethical practice helps build connection.

- **Transparency:** Being clear about how and why we use certain tools.
- **Moderation:** Ensuring communication remains respectful and safe.
- **Privacy:** Protecting sensitive learner information as if it were our own.

Quick Checklist for the Ethical Educator

Action	Ethical Goal
Explain the "Why"	Transparency & Trust
Review Tool Settings	Data Privacy
Moderate Discussions	Digital Safety
Assess the Necessity	Pedagogical Integrity

2.6 The Five Design Principles of This Handbook

Throughout this handbook, five core design principles have been used as reference points for inclusive digital teaching: **clarity, predictability, flexibility, accessibility,** and **reflective** practice. These principles are not abstract ideas; they are intended as practical, everyday guides for the decisions educators make in digital teaching. Taken together, they offer a stable framework for designing courses that are structured and transparent, while still responding to the variety

of needs learners bring with them, in line with contemporary approaches to inclusive digital education and Universal Design for Learning (UDL)².

Clarity concerns how information is organised and communicated to learners. Instructions need to be explicit, learning outcomes should be stated plainly, and assessment criteria must be visible and easy to understand. When learners know what is expected and how a task is structured, uncertainty is reduced. Clarity is not about making the academic challenge easier; it is about removing avoidable confusion. In digital spaces, where learners are often working more independently, this kind of clarity is essential.

Predictability concerns the consistency of the course structure. When modules follow a similar pattern and key elements appear in familiar places, learners develop a sense of orientation. They should not have to relearn how to navigate the course every week. Predictability also supports time management and reduces unnecessary mental effort. It creates a sense of stability that is especially valuable for learners who benefit from routine and clear sequencing.

Flexibility is about recognising that learners may engage with content and demonstrate learning in different ways. Academic standards remain the same, but the paths to reaching them can vary. This may involve providing alternative formats, allowing reasonable flexibility with deadlines where appropriate, or offering content in multiple ways. These are ways of acknowledging learner variability without lowering expectations, a core principle of inclusive instructional design and UDL-based approaches (Sánchez et al., 2025).

Accessibility, as discussed earlier, helps ensure that materials and platforms can be used by the widest possible range of learners. This includes everything from basic formatting and navigation to multimedia and technical requirements. Accessibility should not be treated as an optional extra; it is the baseline for participation. When it is considered from the beginning, inclusion becomes part of the design process rather than a later correction, in line with internationally established standards such as the Web Content Accessibility Guidelines (WCAG)³.

Reflective practice ties the whole framework together. Inclusive digital teaching is not something that can be achieved once and then left unchanged. Courses evolve, learner groups differ, and technology continues to change. Regular reflection, whether through informal review, learner feedback, or more structured evaluation, it helps educators identify what is working and what may

² <https://udlguidelines.cast.org/>

³ <https://www.w3.org/WAI/standards-guidelines/wcag/>

need adjustment. It prevents inclusion from becoming a static checklist and aligns with established models of reflective professional practice in education (Marshall et al., 2022).

By keeping these principles in mind during planning and delivery, educators can make consistent decisions and ensure that inclusion remains a core design goal, rather than an isolated intervention.

3. Learners in Digital Environments

3.1 Learner Diversity and Digital Readiness

Learner diversity is not about what is visible and formally recognised as a need. In practice, differences show up in more subtle ways. Some learners can use platforms and meet deadlines with confidence, while other learners, who are just as capable, may feel lost when trying to navigate online communication. These gaps do not usually reflect what the learners are actually able to do. More often, they reflect prior experience, confidence, and familiarity with digital learning.

Digital readiness varies greatly from one person to another. In any group of learners, some already be very comfortable online tools and courses, while others may be using them for the first time. Assuming that everyone starts with the same level of digital skills can put some learners at a disadvantage.

Motivation and self-regulation also play a very important role. **Online courses require learners to manage their time and follow instructions independently, without immediate support.** For some, this freedom works well. For others, can be overwhelming. Clear schedules and deadlines provide stability and help learners stay on track, when direct help is not available.

Language and reading skills also affect how learners participate. This places a significant demand on reading and comprehension, particularly in text-heavy environments. For learners who read slowly, or those working in a language that is not their first, this can be genuinely challenging. Using plain language and organising content clearly helps learners feel more confident. The aim is not to make the material easier, it is to present it in a way that does not leave anyone behind.

Recognising learner diversity does not mean tailoring every part of a course to each individual. It means planning for a range of learners from the beginning. When educators build courses with clear patterns and easy navigation, they support all learners without singling anyone out.

Readiness should not be seen as something a learner either has or does not have. It is better understood as a range of skills and experiences. Instead of asking, "Is this learner ready for my course?" a more useful question is: "Is my course designed to help learners with different skill levels?" This shift in focus, from the learners to the course design, is at the heart of accessible and inclusive education.

3.2 Common Learning Difficulties in Online Context

Digital environments can make some challenges more visible and harder to manage. Things like sustaining attention, processing information, reading comprehension and staying organised can become more demanding when learners must follow written instructions and navigate independently. In a physical learning environment, learners benefit from teacher support, peer interaction, and non-verbal cues. Online, these are not always available, and what might have been a small question can quickly become a source of real uncertainty.

Attention is one of the most critical challenges in digital learning, as learners must continuously manage limited cognitive resources in environments rich in stimuli and potential distractions (Lodge & Harrison, 2019). Empirical findings further show that learners, particularly those with cognitive difficulties, often struggle not only with maintaining focus, but also with organising information and following poorly structured content. These challenges are closely linked to how learning materials and activities are designed, rather than to access to the platform itself (Cinquin et al., 2021).

Online environments can be full of distractions, and learners must manage these on their own. When pages contain too much text, too many links, or steps that are unclear, it becomes hard to focus. If a learner has to search through a long a long explanation just to find what they need to do, they might lose focus even before they start. Clear layouts and step-by-step instructions can make a significant difference here.

When course formats change frequently, deadline are tights, or new information arrives without warning, pressure increases. **A predictable structure, with clear schedules and consistent timelines, helps learners know what is coming and plan their work accordingly.**

Reading is another significant challenge in online courses, where text is the primary way of communicating. **When content is poorly organised or overly complex, learners may struggle to identify the key points.** Breaking content into clear sections and using headings makes it easier to navigate. Highlighting important information does not make the content less meaningful; it simply makes it easier to follow.

The goal is not to simplify the content of courses. The subject matter should be challenging, but the course design should not add to that challenge unnecessarily. By understanding how digital environments affect

attention, processing, and reading, educators can make more supportive design choices.

3.3 Identifying Barriers in Digital Learning

Digital learning environments have things that can get in the way of learning in ways that are not always easy to see when you are creating a course. Most of the time, the problem is not that the subject is difficult, but how the information is organised and presented. When learners have to search for basic materials or spend too much time trying to understand what the instructions mean, they can become frustrated before they even begin learning. To find these problems, educators need to step and look at the course as if they are seeing it for the first time.

One common barrier is that is poor navigation. When materials are scattered, announcements are disorganised, and external links are added without a clear plan, learners spend more time searching than studying. Even small changes, like inconsistent filenames or varying module layouts can cause confusion. Over time, this kind of confusion reduces engagement. A clear and consistent course structure is the most effective way to address this.

Too much text is also a frequent problem. Long blocks of text can feel overwhelming and make it hard to identify the important points. When instructions, background information and assessment details are all mixed together in one paragraph, it is easy to miss something important. Separating instructions from explanations and using headings to guide the reader makes a significant difference. When the presentation is clear learners can focus on what matters.

Time pressure can also create barriers, especially when deadlines are not clearly communicated. Online learners often have competing demands. If a deadline is buried in a paragraph, or changes are made at the last minute, some learners will be affected more than others. Making timelines visible and repeating dates in the same places each week can make planning easier.

Technology can also be a source of difficulty. Asking learners to use several different tools without clear instructions can cause anxiety. While digital tools can be helpful. Each new tool adds more to the workload. In most cases, keeping things simple and consistent is better for inclusion than using a wide range of technologies.

None of these problems may seem significant on their own. Over time, however, they can add up. A vague instruction, a long reading, and an unfamiliar

submission process may each seem minor, but together they can feel overwhelming. This is why educators need to look at the course as a whole, not just at individual problems in isolation.

Identifying these barriers early allows educators to make targeted adjustments that improve both accessibility and overall learning experience.

4. Designing Inclusive Digital Courses

4.1 Preparing the Digital Learning Environment

Before focusing on content, it is important to consider the digital environment itself. Learners encounter the structure of a course before they engage with its ideas. If navigation feels unclear, essential information is hard to find, or the layout appears crowded, uncertainty begins straight away. In digital learning environments, structure communicates expectations.

Findings from the usability evaluation of the ADA digital environment showed that **even small inconsistencies in navigation or system behaviour can interrupt user flow and reduce confidence**. Issues such as redirect confusion, hidden accessibility options, or excessive scrolling did not prevent access, but they increased effort and hesitation. In an educational context, similar design choices can quietly affect engagement.

Preparing the digital environment therefore means simplifying before adding. A homepage should guide learners, not overwhelm them. Essential information, course overview, structure, deadlines should be visible without extensive scrolling. When learners have to search repeatedly for key elements, attention shifts from learning to orientation.

Consistency is particularly important. If one module uses different naming conventions or places assessment information in a different location, learners must re-interpret the structure each time. That repeated effort increases cognitive load. A predictable layout across modules creates familiarity, and familiarity supports confidence.

Accessibility tools should also be visible and easy to activate. When support features are hidden within profile settings or buried under multiple clicks, they become reactive solutions rather than proactive design elements. Inclusive preparation anticipates need rather than waiting for difficulty to emerge.

Attention should also be given to micro-interactions. Forms should not clear automatically without warning. Error messages should guide correction rather than force repetition. Links should work reliably. These small technical details directly influence user experience and satisfaction. When interaction feels stable and responsive, learners are more likely to engage consistently.

Preparing the digital environment does not require advanced technical expertise. It requires perspective. Reviewing the course space as if entering it for the first time, checking how easily information can be located, whether

scrolling demands are reasonable, and whether structure remains stable across units often reveals simple adjustments that significantly improve usability.

Digital platforms play an important role in enabling access, navigation, and interaction. However, they should not be considered in isolation. A technically robust and accessible platform does not, by itself, guarantee an inclusive learning experience. Inclusion depends on how the platform is used, how content is structured, and how learning activities and communication are designed.

When the learning space is clear, predictable and stable, learners can direct their attention to what truly matters: engaging with ideas, developing competences and participating meaningfully.

In this sense, preparing the digital environment is not only a technical step, but a design decision that directly shapes inclusion.

4.2 Pre-Course Inclusive Readiness Checklist

Before launching the course, educators are encouraged to conduct a brief readiness review. The following checklist supports reflection on structure, clarity and accessibility. It does not require technical expertise, but it encourages a systematic pause before publication.

Indicative areas to review:

- Course homepage
- Learning outcomes
- Instructions
- Deadlines
- Material

4.3 Structuring Modules and Learning Pathways

In the context of inclusive digital design, **learning outcomes are far more than introductory text; they serve as the structural backbone of the course.**

Within the ADEDU framework, a layered architecture (TB1–TB3) is used to keep the different levels of planning connected. This means that outcomes are articulated at the module, unit, and learning object levels. In this way, a clear connection is created between what learners are expected to achieve, the

activities they complete, and the ways in which their learning is assessed. As Biggs et al. (2022) argued, **constructive alignment helps prevent a course from feeling like a collection of disconnected tasks.**

4.4 Inclusive Module Design Template

Designing an inclusive digital module is never accidental; it requires intentional structure. Supportive elements cannot simply be added after the content has already been developed and then described as inclusive. Real inclusion begins much earlier, at the level of the module's architecture: how units are organised, how workload is distributed, and how each activity connects to the intended learning outcomes.

In a modular structure such as the ADEDU framework (TB1–TB3), coherence is a central priority. At the broader module level, the general purpose is defined. As the structure moves to the unit level, the educational strategies and outcomes need to provide a clear sense of direction. By the time the design reaches the level of specific learning objects, everything should be concrete and operational. As Lambert (2018) points out, inclusive design in open and digital spaces is not only about access; it is also about making structural alignment transparent to learners.

This clarity of structure is even more important in digital environments. Learners often navigate course content on their own, without immediate clarification from an educator. For this reason, a module needs predictable internal logic. A typical unit might begin with a brief orientation that explains its purpose, followed by input material, an activity that applies what has been learned, and finally a reflection or assessment. When this pattern is kept consistent, it not only supports organisation but also reduces cognitive load for learners (Mayer, 2019).

Workload balance also matters. Learners should not be faced with extensive readings, complex tasks, and demanding assessments at the same point unless there is a clear pedagogical reason for doing so. Sequencing is important here. Complex tasks benefit from scaffolding (progressive steps that build confidence) rather than being introduced without sufficient preparation.

The way instructions are communicated matters just as much. Plain language is particularly important. Expectations need to be explicit. Learners should know why they are doing a specific task and how it fits into the broader structure of the module. This kind of transparency helps sustain motivation and reduces the uncertainty that often characterizes online learning.

Flexibility can also be built in without losing academic rigor. For example, educators may require all learners to design an intervention plan while allowing them to choose the format or tools they use to create it. **This reflects Universal Design for Learning in practice: maintaining high standards while giving learners different ways to demonstrate what they know.** Ultimately, inclusive module design is about coherence. When the structure is visible and activities align clearly with the outcomes, the whole environment becomes more accessible. For those looking for a practical starting point, a structured template for this process is provided in the Appendix (**Sample Module Structure**).

4.5 Writing Clear and Measurable Learning Outcomes

Clear and measurable learning outcomes are an essential part of inclusive digital education. In an online setting, learners depend heavily on the written instructions provided to them. When expectations feel vague, uncertainty and frustration can quickly follow. Winstone and Carless (2019) argue that clarity in expectations is the first step toward assessment literacy, helping learners understand the rules of the game from the start.

A common issue is the use of abstract verbs such as “understand” or “be aware of.” These describe cognitive processes that are not directly observable and are difficult to assess. It is better to use action verbs that point to a tangible result, such as design, analyse, or evaluate. This focus on evaluative judgement helps learners develop the ability to monitor their own progress against clear standards (Tai et al., 2018).

For example, instead of saying “understand inclusive teaching strategies,” it is more effective to write “design a short lesson plan incorporating inclusive teaching strategies.” The second version makes the goal visible and easier to measure, while also helping the learner visualize what they will actually be doing in assessment.

Language also matters. Outcomes should remain clear and direct. Long sentences with too many conditions increase cognitive load. This is especially important in multilingual groups or adult learning contexts, where clarity becomes even more significant. As Castañeda and Selwyn (2018) point out, digital education must simplify the critical parts of the interface and instructions so that no learner is excluded because of technical or linguistic complexity.

Measurability does not mean rigidity. An outcome can remain measurable while still allowing flexibility in how a learner demonstrates achievement. For instance, instead of requiring all learners to submit a 1500-word report, an outcome might be written as “develop and present an inclusive intervention plan.” In this

case, the format can be adapted to the learner's needs -which reflects Universal Design for Learning (UDL) in practice- while the core competency remains the same. It is also advisable to keep the number of outcomes manageable. Three to five well-formulated outcomes per unit is usually a reasonable range for maintaining focus and coherence.

Ultimately, the issue is one of transparency. Clear outcomes show what matters, how success will be measured, and help learners understand where they stand.

4.6 Designing Inclusive Learning Activities

Designing activities is often the point at which good intentions either come to life or quietly collapse. A module may appear well structured on paper, with clearly written learning outcomes and balanced workload, but if the activities are confusing, overloaded, or disconnected from purpose, learners will feel it immediately.

In digital environments, this becomes even more visible. There is no raised hand, no immediate clarification, and no quick glance from the educator that says, "this is what I mean." Learners are often left alone with the instructions. That is why clarity in activity design is not a stylistic choice; it is an inclusion principle.

An inclusive activity begins with a simple question: **What exactly do I want learners to do here?** Not what I want them to read. Not what I want them to "think about." What do I want them to produce, demonstrate, or apply?

Sometimes a short, focused task works better than a long, open one. A guided case analysis with three clear prompts can be more effective than a broad instruction such as "Discuss inclusive practices." Precision reduces cognitive noise, and in digital settings that noise can accumulate quickly.

Variety matters, but not for decoration. Some participants will engage more comfortably through structured analysis. Others will respond better to applied design tasks or reflective prompts. Including different formats within a unit -a short input, a practical case, a design task, a reflection- creates multiple entry points without lowering expectations. This is where Universal Design for Learning becomes practical rather than theoretical.

Collaborative activities require particular care. They can be energising and meaningful, but they can also generate uncertainty. Clear roles, defined outputs, and time guidance make collaboration safer. Predictability in group tasks supports learners who may struggle with ambiguity or social pressure.

Not every activity needs to be collaborative. Individual tasks allow learners to regulate pace and depth. In inclusive digital education, both modes are necessary.

Complex assignments benefit from being broken into visible steps. Instead of asking participants to “develop a full inclusive intervention plan,” it may be more effective to guide them through stages: identify barriers → propose strategies → justify choices → reflect on implementation. This sequencing reduces overload and supports sustained attention.

Flexibility can also be integrated thoughtfully. For example, an activity may require learners to design an inclusive lesson plan while allowing them to choose the educational context or tools they prefer. This keeps standards high while respecting professional diversity and autonomy.

Purpose should also be visible. When learners understand why they are doing something, engagement changes. A short framing sentence can make a difference:

This activity will help you practice translating inclusive principles into concrete teaching decisions.

Designing inclusive learning activities is not about simplifying content. It is about structuring it in a way that reduces unnecessary confusion, supports different patterns of engagement, and keeps expectations transparent. When activities are clear, purposeful, and thoughtfully sequenced, the digital environment becomes more stable, and stability is one of the most underestimated dimensions of inclusion.

4.7 Selecting and Adapting Open Educational Resources

Open Educational Resources (OER) are not automatically inclusive. They can strengthen a course, but if educators are not careful, they can also undermine its design intentions. The issue rarely lies in the topic of the resource itself; more often, it depends on how the resource is selected and how it is used in practice.

In digital learning, it is easy to select material simply because it is free, visually appealing, or highly recommended. Inclusive design, however, requires a more careful question: is this resource genuinely helping learners reach the intended goal, or is it creating another unnecessary barrier? Free access alone does not make a resource inclusive.

Clarity has to come first, because many open resources are rich in content but structurally difficult to follow. Long walls of text, cluttered slides, and decorative visuals that do not serve a clear purpose all add to cognitive load. Before

including a resource in a module, it is worth reviewing it from the learner's perspective. Is the structure visible? Are the headings clear? Could someone follow the material independently without getting stuck? Accessibility is just as important, although it is often overlooked until a problem emerges. A video without captions or a PDF that a screen reader cannot process is effectively inaccessible for some learners. Sometimes, the best choice is not the most sophisticated or visually impressive resource, but the one that is simple, adaptable, and technically accessible.

Much of the work of inclusion happens during adaptation. It is rare for an OER to fit perfectly into a lesson without some adjustment. Educators may need to simplify the language, shorten a text, or add framing questions to help learners focus. Shortening reading or pairing a video with a reflection activity can transform a passive resource into a more purposeful learning tool. Using only the most relevant parts of a resource is often a sign of careful teaching rather than a limitation. If learners cannot see how a reading or video connects to the task at hand, they are likely to disengage. Transparent integration and explaining why a resource has been included reduces guesswork.

Inclusion often depends on thoughtful reduction. A few carefully chosen, well-integrated resources usually create a stronger experience than a long list of optional materials that can become stressful. Selecting and adapting OER is not simply a technical checklist task; it is a pedagogical decision that can turn open content into a genuine opportunity for every learner.

5. Delivering Inclusive Digital Courses

Up to this point, the Handbook has focused on design decisions: how digital environments are structured, how modules are organised, how learning outcomes are written, and how activities and resources are selected. These elements shape the architecture of an inclusive course before it begins.

However, inclusion does not end at design. Even a carefully structured module can lose coherence if communication is unclear, interaction is inconsistent, or learner concerns are not addressed during implementation.

Delivery is where structure becomes lived experience.

The following section therefore shifts attention from planning to practice. It explores how inclusive principles continue to operate during course facilitation - through communication style, feedback, responsiveness and real-time adjustment. In digital learning environments, these elements are not supplementary. They are central to sustaining engagement and supporting diverse learners throughout the learning process.

In this sense, inclusive delivery is not a separate phase, but a continuation of inclusive design in practice.

5.1 Communication Strategies

Communication in digital courses carries more weight than in face-to-face settings. In physical learning environments, tone and immediate clarification help regulate understanding. Online, written communication becomes the primary orientation mechanism. For this reason, inclusive communication must be intentional.

The [ADEDU Inclusive Communication Guidelines \(D2.3\)](#) emphasised clarity, structured messaging and consistency in terminology as key principles for inclusive dissemination. These principles apply directly to digital course delivery. Instructions should be separated from background explanations. Deadlines should be clearly highlighted. Terminology should remain stable across modules. When the same task is labelled differently in different spaces, learners experience unnecessary cognitive friction.

Findings from the ADA usability evaluation further showed that inconsistent navigation and unclear system behaviour increased hesitation and reduced user confidence. In educational settings, similar effects occur when announcements are fragmented or when expectations are implied rather than stated explicitly. Strategic repetition supports predictability and reduces interpretative effort.

Tone also shapes engagement. Respectful, structured and supportive language does not reduce academic standards; it reduces uncertainty. Inclusive communication recognises that clarity strengthens authority rather than weakening it.

5.2 Engagement and Participation

Engagement does not emerge automatically from well-designed content. Learners may log in regularly yet remain uncertain about how to participate meaningfully.

Within the ADEDU modular structure (TB1–TB3), participation activities are intentionally aligned with learning outcomes. This alignment prevents engagement from becoming decorative. When learners understand how participation contributes to specific competences, interaction gains purpose.

The usability evaluation of the ADA environment demonstrated that task clarity influences both completion rates and user confidence. The same principle applies to participation tasks. **Open-ended invitations such as “Share your thoughts” may appear inclusive but can generate uncertainty.** Structured prompts, clearly defined outputs and visible time expectations reduce hesitation and support broader contribution.

Psychological safety is equally important. Participants should feel that questions, partial answers or tentative contributions are part of learning rather than exposure to judgment. Structured interaction formats, such as guided discussion questions, defined peer feedback tasks, or reflective prompts, create safer entry points for diverse learners.

Engagement strengthens when structure is visible.

5.3 Supporting Diverse Learners in Practice

Design and communication establish the foundation, but inclusive delivery requires attentiveness.

In digital environments, signs of struggle are often subtle: delayed submissions, limited interaction, repeated clarification requests, or silence following complex instructions. These signals should not be interpreted as lack of motivation. They often indicate structural misunderstanding or cognitive overload.

Support frequently takes the form of clarification rather than simplification. Reframing an instruction in shorter language, separating a task into steps, or providing a brief example can restore orientation. Inclusion does not require lowering expectations; it requires removing avoidable barriers.

Consistency also matters. If adjustments are introduced, they should be communicated clearly. Transparency protects trust.

Sometimes a short individual message -checking whether clarification is needed- can prevent disengagement. Inclusive delivery involves noticing small changes in participation patterns and responding proportionately.

5.4 Real-Time Adjustment and Scaffolding

No course unfolds exactly as planned. Even a carefully structured module may require recalibration once interaction begins.

Real-time adjustment does not mean abandoning structure. It means observing learner response and adapting within a stable framework. If widespread confusion emerges, a short synthesis message can re-establish coherence. If multiple learners struggle with the same activity, additional scaffolding may be introduced without altering the overall learning outcomes.

The ADA usability findings emphasised that predictability increases user confidence. In learning environments, predictability supports stability. Adjustments should therefore strengthen clarity rather than introduce new complexity.

Pace modulation is another dimension. Some groups move quickly; others require additional processing time. Monitoring discussion flow, submission patterns and question frequency can inform adjustments while preserving the overall schedule.

Micro-feedback also plays an important role. Brief acknowledgements, targeted clarifications and structured follow-up questions signal presence. In digital spaces, presence must be visible.

Inclusive delivery balances stability with responsiveness. It maintains coherence while allowing calibrated flexibility. When communication is clear, engagement is structured, support is attentive and adjustments are measured, the learning environment remains inclusive in practice- not only in design.

6. Assessment and Feedback

Assessment in digital education is often where inclusion is tested most visibly. A course may be clearly structured and thoughtfully delivered, yet assessment practices can unintentionally create barriers. Inclusive assessment does not mean lowering standards. It means ensuring that learners can demonstrate the intended competence without being disadvantaged by format, ambiguity or unnecessary constraints.

Within the ADEDU modular structure (TB1–TB3), assessment is expected to align directly with learning outcomes. This alignment strengthens coherence and reduces uncertainty. When learners understand what is being assessed and how it connects to stated outcomes, assessment feels transparent rather than intimidating.

6.1 Principles of Inclusive Assessment

Three principles underpin inclusive assessment: fairness, transparency and proportionality.

Fairness does not mean identical treatment. Treating all learners in the same way may appear neutral, but it can overlook differences in processing speed, communication style or digital fluency. Inclusive fairness ensures that what is being assessed corresponds directly to the intended competence.

Transparency is equally important. Assessment instructions should clearly state:

- what is expected,
- how it will be evaluated,
- and what criteria will be applied.

When criteria are unclear, learners spend mental energy trying to interpret expectations rather than demonstrating knowledge. In digital environments, where clarification is not immediate, this ambiguity can significantly affect performance.

Proportionality concerns workload and structural complexity. A task may be intellectually demanding and still be proportionate. However, unnecessary procedural complexity, multiple submission steps, scattered instructions, unclear file requirements, introduces avoidable cognitive load. The ADA usability evaluation demonstrated how structural friction increases hesitation and reduces efficiency. Similar friction in assessment design can influence outcomes independently of competence.

Assessment should challenge understanding, not navigation.

6.2 Flexible Assessment Formats

Flexibility strengthens inclusion when it is structured and intentional.

Offering alternative formats is not about reducing academic expectations, it is about allowing learners to demonstrate competence through different modes of expression. If the learning outcome requires analysis, design, or evaluation, the assessment format should reflect that competence directly.

For example, an outcome focused on designing inclusive instructional strategies could be demonstrated through:

- a structured written proposal,
- a project-based implementation plan,
- or a recorded presentation supported by documentation.

The evaluation criteria remain the same, but the mode of demonstration may vary.

This approach reduces the risk that assessment unintentionally favours a single communicative strength. It aligns with Universal Design for Learning principles and recognises that competence is not tied to one format.

Time constraints also deserve consideration. In some contexts, time-bound performance is integral to the competence being assessed. In others, strict time pressure mainly measures speed. Educators should consider carefully whether time limits are pedagogically justified. Where it is not essential, unnecessary pressure can be reconsidered.

Flexibility must remain transparent. Clear communication about alternative options and consistent evaluation criteria preserves academic credibility.

6.3 Flexible Assessment Planning Matrix

Structured flexibility benefits from explicit planning. Mapping learning outcomes to assessment methods supports coherence. When educators document:

- which outcome is assessed,
- through which format,
- and whether alternative modes are possible.

This planning also reveals imbalance. If several outcomes are assessed through a single high-stakes format, pressure may be concentrated. Spreading formats across a course can distribute cognitive demand more evenly.

The Flexible Assessment Planning Matrix included in the **Appendix (Flexible Assessment Planning Matrix)**, helping educators make assessment decisions more explicit and pedagogically grounded.

6.4 Feedback that Supports Learning

Feedback shapes learner perception of both competence and their sense of belonging.

Inclusive feedback is specific and structured. It distinguishes between what was achieved and what needs further development. Vague praise or broad criticism does not guide improvement.

Clarity is essential. Feedback should be written in accessible language, organised into short sections where possible, and connected directly to stated criteria. When learners can clearly see how feedback relates to assessment standards, trust increases.

Forward-looking guidance is particularly valuable. Rather than focusing on past performance, feedback should indicate practical next steps. This approach turns evaluation into developmental conversation.

Timeliness also matters. In digital contexts, delayed feedback may reduce its relevance and impact on motivation. Even brief, targeted responses can maintain engagement and prevent uncertainty from building up.

6.5 Reflection and Continuous Improvement

Inclusive assessment practices evolve over time.

Patterns across groups of learners can provide valuable insight. Repeated misunderstandings may signal unclear instructions. Consistent underperformance in a specific task may indicate a mismatch between teaching activities and assessment demands.

The ADA usability findings showed that small interface inconsistencies can accumulate into measurable friction. In assessment design, similar small ambiguities can build into avoidable stress. Reflection allows educators identify such patterns early.

Reflection should not rely solely on memory. Structured review questions, what worked? Where did learners hesitate? Were criteria sufficiently explicit? - help transform experience into improvement.

6.6 End-of-Course Reflection Framework

To support systematic improvement, educators can use a structured end-of-course reflection framework (provided in the Appendix). This tool encourages review across:

- alignment between outcomes and assessment,
- clarity of instructions,
- proportionality of workload,
- observed learner barriers,
- and effectiveness of feedback practices.

Recording these observations in a structured format strengthens continuity between course iterations. Inclusive teaching is not static. It is iterative and evidence informed.

Appendix

This appendix brings together a set of practical tools that support the design, delivery and evaluation of digital learning environments ensuring inclusiveness.

Within the scope of the *inclusive digital platforms* deliverable, these tools demonstrate how inclusion is operationalized in practice. While platforms provide technical infrastructure, inclusive learning depends on how content is structured, communicated, and assessed.

The tools are designed to be simple, adaptable, and directly applicable in real teaching contexts.

A. Pre-Course Inclusive Readiness Checklist

This tool is used before a course begins, to review whether the overall design, structure and communication support inclusive access and participation.

Course Structure and Orientation

- Is the course homepage clearly organised?
- Is the overall course structure easy to understand at first glance?
- Are modules arranged in logical order?
- Are learners able to see where to begin?
- Are the main sections of the course clearly labelled?

Navigation and Access

- Can essential materials be located without excessive clicking or scrolling?
- Is navigation consistent across modules?
- Are file names clear and descriptive?
- Are links working correctly and clearly labelled?
- Are accessibility-related options visible where possible?

Communication and Expectations

- Are learning outcomes visible at the start of each module?
- Are deadlines clearly stated and easy to locate?
- Are instructions separated from background explanation?
- Is the same task referred to with the same name across the course?
- Are key announcements written in clear and direct language?

Accessibility Basics

- Is the text readable without excessive zooming?
- Is there sufficient contrast between text and background?
- Are headings used consistently?
- Are captions or transcripts available where relevant?
- Are key visuals supported by short written explanation where needed?

Workload and Coherence

- Is the expected workload balanced across modules?
- Are essential and optional materials clearly distinguished?
- Do activities align with stated learning outcomes?
- Are assessment tasks introduced clearly and early enough?
- Does the course feel manageable from a learner's point of view?

B. Accessibility Quick Audit Tool

This tool is used during course design or revision, to identify basic accessibility issues in text, structure, and multimedia before learners access the material.

Text and Formatting

- Is the font size readable without zooming excessively?
- Is there sufficient contrast between text and background?
- Are headings clearly separated and used consistently?
- Are long paragraphs broken into manageable sections?
- Is important information visually distinguishable (without relying only on colour)?

Structure and Navigation

- Is the course layout consistent across modules?
- Are key sections clearly labelled?
- Can learners find essential information (e.g. deadlines, instructions) easily?
- Are file names clear and descriptive?

- Is information grouped logically rather than scattered across multiple pages?

Multimedia and Documents

- Do videos include captions where possible?
- Are transcripts or summaries provided for audio materials?
- Are images accompanied by meaningful alternative text (alt text) where necessary?
- Are downloadable documents structured clearly and easy to read?
- Are links clearly labelled to indicate their destination?

C. Module Structure

This tool is used during course design to structure modules in a clear, consistent and accessible way, supporting navigation, reducing cognitive load, and aligning content, activities and assessment.

Module Title

Use a short, descriptive title that clearly reflects the focus of the module.

Module Description

Briefly explain the purpose and expected learning gains.

Learning Outcomes

Define clear and measurable outcomes aligned with activities and assessment.

Unit Structure

Organise content into focused units with clear purpose and progression.

Learning Materials and Activities

Include only essential materials and distinguish between core and optional elements.

Assessment

Use a simple, clearly defined task aligned with the outcomes.

Estimated Workload

Provide a realistic estimate to support planning and accessibility.

Final Note

A clear structure supports inclusion by improving orientation, reducing cognitive load, and enabling consistent participation across diverse learners.

D. Sample Inclusive Assessment Rubric

This tool is used to support transparent, consistent and accessible evaluation by making assessment criteria clear and understandable for all learners.

Why Use an Inclusive Rubric

Rubrics make expectations explicit, reduce ambiguity, and support fair and accessible evaluation.

Sample Inclusive Assessment Rubric

Criterion	Excellent	Good	Satisfactory	Needs Improvement
Alignment with learning outcomes	The activity clearly supports the intended learning outcomes.	The activity supports the outcomes with minor gaps.	The connection with outcomes is partly visible.	Alignment with outcomes is unclear.
Clarity and structure	Instructions and task structure are clear and easy to follow.	Instructions are mostly clear with minor ambiguities.	Some instructions may require clarification.	Instructions are unclear or incomplete.
Application of inclusive principles	The activity shows clear consideration of inclusion and accessibility.	Inclusive elements are present but could be strengthened.	Limited reference to inclusive design.	Inclusive considerations are largely absent.
Feasibility and relevance	The activity is realistic and appropriate for the intended learners.	The activity is mostly realistic with small limitations.	The activity may be difficult to implement.	The activity is not clearly feasible or relevant.

Guidance for Use

Keep criteria simple and share the rubric before the task.

Final Note

Transparent assessment supports trust, learner confidence, and inclusive participation.

E. Flexible Assessment Planning Matrix

This tool is used during course planning to ensure that assessment formats are aligned with learning outcomes while allowing flexibility for diverse learners.

Flexible Assessment Planning Matrix

Learning Outcome	Main Assessment Format	Alternative Format (if appropriate)	Notes

Quick review questions

- Is the assessment clearly aligned with the intended learning outcome?
- Is the selected format necessary for the competence being assessed?
- Could an alternative format allow the same competence to be demonstrated?
- Are expectations, criteria and workload clear from the start?

F. End-of-Course Reflection Framework

This tool is used after course completion to reflect on what worked well and to identify areas for improvement in terms of inclusion, engagement and accessibility.

Course Structure and Organisation

- Was the overall course structure clear and manageable for learners?
- Did learners appear to understand how the course was organised?
- Were any modules, materials or instructions unnecessarily complex or difficult to locate?
- Did the sequencing of activities support progressive learning?

Communication and Clarity

- Were expectations communicated clearly throughout the course?
- Were instructions easy for learners to follow?
- Did learners need repeated clarification on the same points?
- Were key announcements and deadlines sufficiently visible?

Participation and Engagement

- Which activities appeared to support learner participation most effectively?
- Were there points in the course where engagement noticeably decreased?
- Did the digital environment support active participation, or did it create friction?
- Were all learners able to participate meaningfully?

Assessment and Feedback

- Were assessment tasks aligned with the intended learning outcomes?
- Did learners seem to understand what was expected in assessment?
- Were assessment formats manageable and appropriate?
- Did feedback processes support learning effectively?

Inclusion and Learner Support

- Were there signs that some learners experienced avoidable barriers?
- Which materials, formats or interactions seemed to support inclusion well?
- Were reasonable adjustments or alternative formats needed during the course?
- What could be improved to make the course more accessible and supportive next time?

Priorities for Revision

- What worked well and should definitely be retained?
- What needs minor revision?
- What should be redesigned more substantially before the course is offered again?
- What is one realistic improvement that can be implemented immediately?

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