Digital empowerment for lifelong learning and transformative andragogy (DELTA) for adult educators

Introduction to the DELTA framework and resources

The UNESCO Institute for Lifelong Learning (UIL) undertakes research, capacity-building, networking and publication on lifelong learning with a focus on adult and continuing education, literacy and non-formal basic education.

Its publications are a valuable resource for education researchers, planners, policy-makers and practitioners. While the programmes of UIL are established along the lines laid down by the General Conference of UNESCO, the publications of the Institute are issued under its sole responsibility.

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Foreword

In an era marked by rapid digital transformation and evolving societal needs, the role of adult educators has never been more vital. The Digital Empowerment for Lifelong Learning and Transformative Andragogy (DELTA) framework responds to the need for inclusive, equitable and forward-looking approaches to adult learning and education. As digital technologies reshape the landscape of learning, it is imperative that adult educators are equipped with the competencies, resources and support necessary to guide learners of all backgrounds towards meaningful participation in society.

Rooted in the principles of lifelong learning, digital empowerment and transformative andragogy, the DELTA framework is not a one-size-fits-all model. Rather, it is a flexible and adaptable tool that can be tailored to diverse national and local contexts. It supports the integration of digital competencies across various adult education sub-sectors, including non-formal education, technical and vocational education and training, higher education and open education. Developed through an extensive three-year collaborative and consultative process involving international experts, technical working groups, educators from participating UNESCO Member States and partner institutions, the DELTA framework embodies a shared commitment to quality, inclusion and innovation in adult learning systems.

Its importance is manifold. DELTA aligns with global education priorities – most notably, the Marrakech Framework for Action, which emphasizes the professionalization of adult educators, and UNESCO's expanded definition of literacy, which recognizes digital literacy as a critical twenty-first century skill. In advancing the competencies required for inclusive and effective digital transformation, it also contributes directly to Sustainable Development Goal (SDG) 4 (quality education).

By bridging the digital divide and empowering educators with essential digital skills, DELTA enhances their confidence and capacity to navigate and lead digital change. It encourages international collaboration, enabling countries to share experiences and best practices in building digital competencies across education systems.

This publication is both timely and essential. It provides a comprehensive set of competencies and practical resources to support adult educators in adapting to digital transformation, always centring the needs of both educators and learners. As a strategic guide, the DELTA framework will assist countries in revising adult education policies to ensure that digital transformation is inclusive, equitable and human-centred. Importantly, this document is the first in a series of DELTA resources designed to support Member States in implementing and contextualizing the framework.[1]

I wish to express my sincere gratitude to all those who contributed to the development of the DELTA framework, including our partners at Shanghai Open University, the dedicated team at the UNESCO Institute for Lifelong Learning, and the many experts and practitioners whose insights have shaped this work. Together, we reaffirm our shared commitment to building inclusive, resilient and sustainable learning societies.

As we look to the future, I am confident that the DELTA framework will serve as a valuable guide for policymakers, programme developers and educators worldwide. Let us continue to work together to ensure that every adult has the opportunity to thrive in a digitally empowered world.

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[1] The series includes a customization guide for policymakers, an adult educator guide and a diagnostic development guide. These will be launched in 2026.

Acknowledgements

Glossary

The following glossary of key terms is provided to clarify the concepts and terminology used throughout this report. Many of these terms are subject to ongoing debate. The definitions here are intended to establish a common ground for discussion within this report, while also inviting critical engagement with these concepts as they relate to the DELTA framework and broader discussions of adult learning and digital competency.

Adult learning and education

Since the adoption of the Recommendation on Adult Learning and Education (RALE) in 2015, there has been international agreement on the use of the term 'adult learning and education' (ALE) (UNESCO & UIL, 2016). ALE is 'a core component of lifelong learning. It comprises all forms of education and learning that aim to ensure that all adults can participate in their societies and the world of work. It denotes the entire body of learning processes, formal, non-formal and informal, whereby those regarded as adults by the society in which they live, develop and enrich their capabilities for living and working, both in their own interests and in those of their communities, organizations and societies. [ALE] involves sustained activities and processes of acquiring, recognizing, exchanging, and adapting capabilities' (UNESCO & UIL, 2016, p. 6).[2]

Adult educators

Adult educators are professionals who plan, implement and evaluate educational opportunities for adults in a variety of contexts (formal, non-formal, informal) and under different titles (e.g. instructor, trainer, facilitator, mentor, coach). Their main tasks include needs assessment, curriculum development, teaching, guidance and evaluation. They support adults in acquiring, updating or deepening knowledge, skills and competencies for personal development, active citizenship, social inclusion and employability (DVV International et al., 2021).

Competence

Competence encompasses the knowledge, skills and attitudes, and the ability to connect and apply these appropriately in specific situations (Chappell et al., 2020). It refers to the capacity to act and reflect in particular contexts, such as the professional practice of an adult educator. Competence is a complex and multifaceted concept that highlights performance in the adult education context. It emphasizes not only the possession of knowledge and skills but also the ability to apply them critically and reflectively in various real-world situations. Curriculum globALE (DVV International et al., 2021) adopts a competency-based approach despite acknowledging its complexities and controversies, as it aligns with current trends in education policy and provides a comprehensive view of an educator's capabilities.

Lifelong learning

Lifelong learning is 'rooted in the integration of learning and living, covering learning activities for people of all ages (children, young people, adults and older people, girls and boys, women and men) in all life-wide contexts (family, school, community, workplace and so on) and through a variety of

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[2] It is important to note that this and other definitions in this glossary were originally formulated for the collection of comparable education data across countries. They may not cover all forms of education and learning globally, and it is often difficult to establish clear-cut categorizations. Many 'mixed' forms fulfil criteria of more than one category (formal, non-formal, informal).

modalities (formal, non-formal and informal), which together meet a wide range of learning needs and demands. Education systems that promote lifelong learning adopt a holistic and sector-wide approach involving all sub-sectors and levels to ensure the provision of learning opportunities for all individuals' (UIL, 2022c).

Technical and vocational education and training

Technical and vocational education and training (TVET) comprises education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods. As part of lifelong learning, TVET can take place at secondary, post-secondary and tertiary levels and includes work-based learning, continuing training and professional development, which may lead to qualifications. TVET also includes a wide range of skills development opportunities attuned to national and local contexts. Learning to learn, the development of literacy and numeracy skills, transversal skills and citizenship skills are integral components of TVET (UNESCO, 2015).

The International Standard Classification of Education (ISCED) provides internationally agreed definitions to facilitate comparisons of education systems across countries.

Formal education

'Formal education is education that is institutionalised, intentional and planned through public organizations and recognised private bodies, and – in their totality – constitute the formal education system of a country. Formal education programmes are thus recognised as such by the relevant national education or equivalent authorities, e.g. any other institution in cooperation with the national or sub-national education authorities. Formal education consists mostly of initial education. … Vocational education, special needs education and some parts of adult education are often recognised as being part of the formal education system. Qualifications from formal education are by definition recognised' (UIS, 2012, p. 11).

Non-formal education

'Non-formal education is education that is institutionalised, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or complement to formal education within the process of the lifelong learning of individuals. …It is often provided to guarantee the right of access to education for all. It caters to people of all ages but does not necessarily apply a continuous pathway-structure' (UIS, 2012, p. 11).

Informal learning

Informal learning is defined as 'forms of learning that are intentional or deliberate, but are not institutionalised. … Informal learning may include learning activities that occur in the family, workplace, local community and daily life, on a self-directed, family-directed or socially-directed basis' (UIS, 2012, p. 12).

Incidental learning

Incidental learning 'may occur as a by-product of day-to-day activities, events or communication that are not designed as deliberate educational or learning activities. Examples may include learning that takes place during the course of a meeting, whilst listening to a radio programme, or watching a television broadcast that is not designed as an education programme' (UIS, 2012, p. 12).

Literacy

Literacy is a key component of ALE. It involves 'a continuum of learning and proficiency levels which allows citizens to engage in lifelong learning and participate fully in community, workplace and wider society. It includes the ability to read and write, to identify, understand, interpret, create, communicate and compute, using printed and written materials, as well as the ability to solve problems in an increasingly technological and information-rich environment. Literacy is an essential means of building people's knowledge, skills and competencies to cope with the evolving challenges and complexities of life, culture, economy and society' (UNESCO & UIL, 2016, p. 7).

Digital literacy

Basic information and communications technology (ICT) skills are identified as one of the global indicators of SDG 4 for countries to monitor (SDG4 .4.1: The proportion of youth and adults with [ICT] skills, by type of skill; (UN DESA, 2025). To support Member States in defining, training and monitoring digital literacy, the Global Alliance to Monitor Learning (GAML) developed a global framework for digital literacy (Law et al., 2018). The framework defines digital literacy as 'the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy' (Law et al., 2018, p. 6).

Digital competency

Based on the DigCompEdu definition (Redecker, 2017, p. 90), 'digital competence is the confident, critical and responsible use of, and engagement with, digital technologies for learning, work, and participation in society.' This definition emphasizes not just the ability to use digital technologies, but also the critical thinking and responsible engagement that educators need to be able to demonstrate.

Media and information literacy

Media and information literacy refers to the knowledge, skills and attitudes that enable citizens to critically understand, access, evaluate, use and engage with media and information resources, fostering responsible communication, self-expression, intercultural dialogue and democratic participation (UNESCO, 2013).

Information and data literacy

As part of UNESCO's Global Framework of Reference on Digital Literacy Skills, information and data literacy is defined as the ability 'to articulate information needs, to locate and retrieve digital data, information and content. To judge the relevance of the source and its content. To store, manage and organise digital data, information and content' (Law et al., 2018, p. 23).

AI literacy

AI literacy for teachers, as defined by UNESCO in the AI Competency Framework for Teachers, is the foundational level of competence that enables educators to evaluate, select and use AI tools effectively and ethically in their practice (UNESCO, 2024). It encompasses a critical understanding of AI's human-led nature, awareness of ethical issues, basic knowledge of AI technology, and the ability to assess and leverage AI's pedagogical benefits while mitigating risks. This literacy forms the basis for teachers to make judicious use of AI in education while maintaining human-centred and ethical approaches.

Digital inclusion

The United Nations (UN) defines digital inclusion as 'equitable, meaningful, and safe access to use, lead, and design of digital technologies, services, and associated opportunities for everyone, everywhere' (UN, 2025, p. 2). Digital inclusion promotes human rights and takes an intersectional approach, addressing diverse barriers to technology access and use through comprehensive policies and multi-stakeholder actions. It aims to dismantle structural inequalities and ensure equitable opportunities for all by guaranteeing accessible, affordable digital resources and fostering safe online spaces that empower diverse participation in both content creation and the development of digital ecosystems.

Digital empowerment

The term 'digital empowerment' is not widely used or precisely defined in international policy contexts. However, the UN's study on empowerment demonstrates that the concept itself carries great depth and importance across Member States, showing multiple interpretations in its research publication on the topic (UN DESA, 2012). This diversity implies that individuals and communities can shape its meaning in various contexts, which is vital in the context of adult education. In relation to digital empowerment more specifically, this refers to the process of enhancing individuals' and communities' capacity to access, understand, create and effectively use digital technologies to improve their lives, participate fully in society and shape their digital environments. It therefore refers not only to the use and understanding of technology, but also to how technology serves human rights and development in individual and community contexts.

Self-directed learning

Self-directed learning is a meta-competence in which adult learners assume primary control over their learning objectives and processes, drawing on intrinsic motivation and life experiences to engage in self-planned learning projects often motivated by curiosity and practical application needs (Knowles, 1975; Tough, 1971). This approach encompasses learner responsibility for proactive meaning-making within contextual factors that influence learning possibilities, though research indicates many adults require developmental scaffolding to become competent self-directed learners rather than being 'lost at sea' in available information (Morris, 2024; Morris & Rohs, 2021).

Transformative practice

Transformative practice encompasses both individual transformative learning – where adult educators critically examine and fundamentally change their perspectives and professional identities through reflection on underlying beliefs about technology-enabled teaching – and community-centred digital transformation, which focuses on the systematic changes in adult education needed to leverage technology effectively (Mezirow, 1978; Kraus et al., 2021). Adult educators are positioned to bridge adult education with community-wide digital transformation initiatives, requiring them to develop competencies that address both personal professional development and broader digital transformation strategies.

Introduction

Following the UN Summit of the Future in 2024, which aimed to forge a new global consensus on building a more peaceful, prosperous and sustainable world, addressing the education needs of adults remains critical. With an estimated 754 million adults worldwide still lacking basic literacy skills (UIS, 2024), adult educators play a crucial role in fostering inclusive lifelong learning in a world that is increasingly dominated by digital technologies.

The context of adult education is complex and varies considerably across regions. Adult educators are particularly important in addressing the diverse needs of adult learners, especially those from disadvantaged or marginalized groups. They act as facilitators, mentors and guides, fostering critical thinking and personal development (Brookfield, 1985). Adult educators support learners in developing employment and practical life skills, language proficiency, cultural understanding and adaptation, strategies for emotional well-being, and active citizenship skills. The field of adult education is therefore working towards greater professionalization to meet these varied demands – an essential step in overcoming barriers to participation and quality in adult education globally (DVV International et al., 2021).

Adult educators themselves form a highly diverse group, and the term 'adult educator' is understood differently across contexts. Roles range from part-time volunteer facilitators teaching basic skills informally to full-time professionals delivering comprehensive curricula in formal institutions (Rogers, 2005). This diversity is reflected in the varied training and qualifications they receive, from short non-formal courses for volunteers to formal university degrees for professionals. This demonstrates the complex, context-dependent nature of adult education across countries and programmes, and highlights why a standardized or normative training framework would not work in all settings.

At the same time, rapid digital transformation is reshaping adult education (Wildemeersch & Jütte, 2017), presenting both challenges and opportunities. It affects how adult education is delivered, the skills and knowledge in demand, and the goals and outcomes of adult education itself (Rott & Schmidt-Hertha, 2024). Technological change also requires adult educators to adapt, often by developing new digital competencies (Caena & Redecker, 2019). Within communities, issues of technology access and digital inequality must also be addressed (Van Dijk, 2020). In this context, adult educators may act as digital mentors, helping learners to develop the skills and confidence needed to navigate digital environments. They support adults in using technologies responsibly, evaluating digital information critically, and participating actively in society. In doing so, they are instrumental in strengthening learners' ability to engage with digital information and technologies critically and effectively (Avramovska & Czerwinski, 2023).

Three key challenges hinder the development of effective support systems for diverse adult educators. First, despite its importance, adult education often remains low on the political agenda, resulting in varying levels of political and financial commitment across regions and contexts (UIL, 2019). This is reflected in limited capacity-building initiatives and continuing professional development (CPD) opportunities for adult educators, particularly in non-formal education settings (Hinzen & Schmitt, 2016). Investment in adult education and in the professional development of adult educators is often insufficient (Elfert & Rubenson, 2013; Wallis et al., 2022). Adult educators need support that enables them to take ownership of their professional development.

Second, although adult educators play a critical role in expanding learning opportunities, especially for marginalized groups, they often lack access to adequate training and professional development. Only 44 per cent of respondents to the *Fifth Global Report on Adult Learning and Education* (*GRALE 5*) reported progress in the quality of continuing training and professional development (UIL, 2022a). In many countries, adult educators work without formal qualification requirements or institutionalized pathways for capacity-building (Hinzen & Schindele, 2006). This gap is particularly evident in the area of digital competence, where rapid technological change has outpaced existing CPD provision (Curran et al., 2019).

Third, existing digital competency frameworks focus predominantly on formal education and teachers, with few making explicit reference to adult educators or offering guidance tailored to their specific needs. The European Framework for the Digital Competence Framework for Educators (DigCompEdu) is one of the few that mentions adult education, but its focus remains primarily on formal education (Redecker, 2017). Frameworks and initiatives designed specifically for the professional development of adult educators are limited, and most discussions are confined to a smaller number of countries, such as the USA (Smith, 2017), Singapore (Zan et al., 2020), Scotland (Education Scotland, n.d.), Canada (Youmans & Godden, 2022) and New Zealand (Teaching Council of Aotearoa New Zealand, 2025). Very few of these discussions explicitly address the digital competencies that adult educators require to adapt continuously to the increasing digitalization of learning environments (Caena & Redecker, 2019).

Given these challenges, a framework that is flexible, adaptable and focused on developing reflective practitioners and transformative leaders is essential. Such a framework would address the diverse needs of adult educators across contexts while empowering them to adapt to the changing landscapes of adult education in increasingly digitalized learning, work and societal environments. The DELTA framework is introduced here as a set of competencies and curriculum resources that demonstrate how adult educators can develop their digital skills and engage effectively and critically with evolving digital technologies and their impacts on societies.

The DELTA framework was developed at a time when digital technologies, and in particular artificial intelligence (AI), are transforming the possibilities of adult education. While these advancements offer unprecedented opportunities to enhance learning experiences, they also risk exacerbating existing inequalities. DELTA provides guidance and support to adult educators, helping them not only to respond to this challenge but also to lead and transform adult education by centring learners' needs and using technology to create positive change in learning environments and communities.

It is important to recognize that adult educators are themselves learners when it comes to developing digital competencies. They have varying levels of access to, and experience, comfort, familiarity and expertise with, technology. Adult educators also approach digital learning with diverse professional identities – some with well-established teaching philosophies and extensive classroom experience, others still developing their approach. The DELTA framework guides adult educators to reflect on their professional identities and build on their prior experience, with a focus on four key digital competence domains of practice: (1) instructional practice, (2) digital empowerment, (3) media and information literacy (MIL), and (4) transformative practice.

The DELTA approach to digital competencies acknowledges the varied career trajectories and meets educators at their respective stages of professional development. It conceptualizes technology not only as a set of skills to be acquired but also as a medium through which educators can develop their professional identity and instructional practice. The transformative aspect of this approach positions educators as active participants in shaping the role of technology in adult education and in society more broadly.

Likewise, while adult educators have diverse needs, countries also have distinct adult education priorities, policies and values. The DELTA framework is intentionally designed to be customized to align with national adult education ecosystems. In collaboration with technical working groups from nine countries, UIL has developed guidelines for policymakers and adult educators to adapt DELTA to their specific national and regional contexts. In this way, the framework provides a foundation that aligns with existing national initiatives and education systems.

Finally, a set of five self-learning modules for digital competence development, aligned with the DELTA framework, is available for immediate use. This approach aims to enhance the quality and effectiveness of adult education in the digital age, contributing to more inclusive, equitable and sustainable societies where lifelong learning is not only possible but also a recognized right and opportunity for all.

This document presents the background of the DELTA framework in greater detail, followed by three sections: (1) an overview of the DELTA framework, including its core principles, self-directed learning approach and domains of practice; (2) DELTA resources available for policymakers and educators; and, (3) in the appendices, DELTA competencies, sample modules and readiness indicators.

Background

The development of a digital competency framework for adult educators is underpinned by a philosophy of empowerment, inclusion and lifelong learning in the digital age. The DELTA framework aligns with the vision set out in the 2015 RALE (UNESCO & UIL, 2016), which emphasizes the importance of developing a culture of quality in adult learning through the continuing professional development of educators and the enrichment of learning environments. Education must also be reimagined to address global challenges and inequalities exacerbated by rapid technological change (UNESCO, 2021a). The framework aims to contribute to the UN SDG 4 on quality education, recognizing the crucial role of educators in realizing the transformative potential of adult learning. It follows up on the recommendations of UNESCO's global report *Reimagining Our Futures Together: A New Social Contract for Education* (2021a) and was developed in line with the UNESCO Strategy on Technological Innovation in Education (2021–2025) (2021b).

Adult education is distinguished by its learner-centred approach and recognition of the diverse experiences and motivations of adult learners (DVV International et al., 2021). As established in the seminal works on andragogy by Knowles (1975) and Brookfield (1985), adult learning is often self-directed, with learners establishing their own objectives, methodologies and assessment criteria. Merriam and Bierema (2013) further highlighted that adult educators play a dual role – as adult learners themselves, continuously developing their skills, and as facilitators of lifelong learning for their students. According to this principle, adult educators may be learning independently to develop their digital skills for instructional practice, while simultaneously fostering digital competencies in their adult learners to enhance employability and well-being prospects (Merriam & Baumgartner, 2020).

Existing digital competence frameworks for educators often overlook the unique contexts and diverse needs of adult educators. The DELTA framework aims to fill this gap by providing a holistic approach focused on the competencies needed to make responsible choices surrounding digital technology, specifically tailored to the needs of adult educators. This need is underscored by the fact that adult

educators, like their learners, bring diverse identities, experiences, contexts and needs to their learning and teaching practice (Fleener & Coble, 2022; Gouthro, 2022; Smith & Duckworth, 2022).

The framework emphasizes the importance of educators being able to critically evaluate and balance the use of digital tools and environments against other andragogical, social inclusion or accessibility concerns. The learning needs of the most marginalized are often distinct, requiring special attention when promoting digital inclusion and equity through education (Unwin et al., 2020). The DELTA framework incorporates principles of human-rights education (Selwyn & Facer, 2013; Tibbitts & Katz, 2017) and cultural sensitivity (Traxler & Crompton, 2020). It also addresses emotional and practical barriers to digital engagement, such as technophobia (Brosnan, 2002) and digital poverty (Galperin & Mariscal, 2007; Zamani & Vannini, 2022), which can significantly affect adult learning outcomes. Acknowledging such concerns means that the most effective learning or teaching strategy may not always involve technology. Adult educators need the competence to discern when digital tools enhance learning outcomes and when other methods might be more appropriate. This nuanced understanding allows educators to make informed decisions about integrating technology in ways that truly serve the needs of adult learners.

The DELTA framework was developed through an extensive review of digital competency frameworks, followed by iterative refinement through multiple forms of collaborative evaluation. An expert advisory group was first consulted to provide feedback and suggestions for improvement. In autumn 2024, a hybrid capacity-building workshop to strengthen the digital competencies of adult educators was launched to pilot and test the framework in practice. Drawing on contributions from four teams in China, Egypt, Kenya and Uzbekistan, DELTA was simplified considerably. A second iteration of this workshop took place in 2025, involving five additional technical working groups from Kazakhstan, Nepal, the Philippines, Uganda and Zimbabwe. Their feedback, grounded in practical experience and deep knowledge of national priorities and challenges, led to significant revisions of the framework.

The current structure of the DELTA framework incorporates core principles, growth stages and domains of practice. A detailed list of competencies is provided in Appendix 1, while additional resources – including capacity building units mapped to the DELTA competencies and readiness indicators for each growth stage – are set out in Appendix 2 and 3. This indicative framework will be presented to Member States for adaption and contextualization in line with national contexts, policy priorities and the diverse needs of adult educators.

Revisions to the DELTA framework

Given the iterative nature of its development, and the unique characteristics of adult education that prevented reliance on existing frameworks, we outline here the key discussions that informed our choices and the subsequent revisions to the DELTA framework.

The first draft of DELTA was developed in 2023 following a comprehensive literature review and comparative analysis of existing digital competence frameworks. This initial version was presented to the advisory group of experts, including practitioners in ALE and digital learning, during a one-day virtual review session. Early discussions focused on the framework's underlying philosophy and structure, with feedback emphasizing the need to highlight its humanistic orientation, specify domains of practice and present skill areas in clusters. This led to expansion of the framework, with the second version containing 118 competencies in total.

The second version was shared with experts and partner organizations such as the Institute for International Cooperation of the Deutscher Volkshochschul-Verband e.V. (DVV International) and the European Association for the Education of Adults (EAEA) for further review, and subsequently with four technical working groups[3] from the countries participating in the hybrid capacity-building workshop, held partly in person at Shanghai Open University (SOU) and partly online via the UIL Learning Hub[4] in 2024. As technical working groups engaged practically with the framework, a key issue emerged concerning the level of detail and complexity. While experts and partner organizations valued the framework's comprehensiveness and customization options, technical working groups emphasized the need for greater simplicity from a practical implementation perspective. Translation challenges were also apparent, as the complexity of the framework made it difficult to preserve original meaning and address cultural nuances when adapting terminology into local languages.

The pilot-testing phase in 2025 brought these concerns into sharper focus through national contextualization workshops in Kenya and Uzbekistan, and virtual consultations with China and Egypt via the UIL Learning Hub Community of Practice. The diversity of contexts – open university educators in China, literacy facilitators in Egypt, basic literacy and non-formal education facilitators through community learning centres in Kenya, TVET educators in Uzbekistan – revealed significant differences in infrastructure, access and the types of tools prioritized by each countries. A second major discussion concerned whether foundational instruction in specific digital tools should be delivered independently of an adult educator's context. While working groups expressed interest in tool-specific training, variation in technological priorities, access to resources and infrastructure underscored the limits of this approach. Tool-specific training can quickly become outdated and may not address diverse needs across contexts. This reinforced the value of a flexible framework that can be adapted to diverse contexts, supporting its long-term relevance and effectiveness.

These discussions led to significant revisions in the third version, developed in 2025. The framework was simplified to start with fewer core elements and competencies, allowing for expansion through customization. It was further grounded in adult learning principles from a lifelong learning perspective, acknowledging the agency and autonomy of adult educators as learners themselves (Beavers, 2009; Knowles, 1980). The emphasis on empowerment reflects the importance of relationships between educators and adult learners, recognizing that technology-enhanced education must support rather than undermine these relationships.

The second hybrid capacity-building workshop in 2025, which invited additional technical working groups from Indonesia, Kazakhstan, Nepal, Uganda and Zimbabwe, confirmed that the simplified framework had improved its usability. The workshop also highlighted the challenge of aligning policy priorities with the realities faced by adult educators. Across participating countries, limited time and heavy workloads were consistently cited as barriers to professional learning. The third version of DELTA was clearer in how it centred adult educators, encouraging strategies to increase educator participation. At the same time, from a policy perspective, working groups needed tools to understand adult educators' competencies and to evaluate the impact of interventions. This discussion led to significant improvements in the customization resources, making them more useful for policymakers while preserving the flexible, educator-centred approach.

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[3] The four technical working groups comprised participants from China, Egypt, Kenya and Uzbekistan. Further information about the UIL–SOU capacity-building project Strengthening Digital Competencies of Adult Educators is available at: https://www.uil.unesco.org/en/strengthening-digital-competencies-adult-educators

[4] UIL's capacity-building platform, the UIL Learning Hub, is available at: https://learninghub.uil.unesco.org.

Overall, the DELTA framework aims to empower adult educators to engage with evolving technologies and to use digital tools effectively, safely and sustainably. By providing a flexible framework and curriculum resources, it enables adult educators to create transformative learning experiences that contribute to the achievement of SDG 4, ensuring inclusive and equitable quality education for all. The framework and resources are designed for customization and adaption, offering both guidance and inspiration. Programme designers may choose to adapt DELTA by elaborating on core principles in their context, defining delivery modes, or selecting topics aligned with their priorities. All curriculum resources are available under open licences, allowing users to take, adapt or remix materials to suit their needs. The goal is for the framework to remain relevant and applicable across diverse settings and learner groups.

Overview of the DELTA framework for adult educators

The Digital Empowerment for Lifelong Learning and Transformative Andragogy (DELTA) framework emphasizes three interlinked areas, as highlighted in its name:

- *Digital empowerment:* Beyond enabling adult educators and their learners to use digital tools and resources, digital empowerment addresses inequalities in digital access while fostering critical engagement with technology's impact on educational practices and community environments.

- *Lifelong learning:* Ongoing technological change requires educators to approach professional learning in digital competencies thoughtfully, evaluating the educational value and ethical implications of digital tools. By adopting a growth mindset and a lifelong learning approach, educators remain adaptable to technological change and can leverage technology for their professional development.

- *Transformative andragogy:* By focusing on transformative andragogy, the framework highlights both the methods and principles of educating adults and the transformative aspect of learning (addressed further in the section *Digital competence domains of practice*). 'Andragogy' refers to the art and science of helping adults learn, making it a relevant concept for this framework.

UIL's approach to DELTA is grounded in values and human rights, aligning with its commitment to promoting inclusive and sustainable societies for all. It incorporates three defining characteristics:

- *Designed for adult educators*, who bring diverse life experiences, motivations and barriers that shape how they engage with professional learning. Digital competence frameworks must acknowledge the distinct characteristics of adult education – such as educators' prior experience, their need for practical application and their capacity for self-direction. Many also work in diverse educational settings, with non-formal and informal contexts often overlooked in existing frameworks.

- *Interlinked with existing frameworks and strategies.* DELTA builds on international resources in digital competency and adult education, such as Curriculum GlobALE (DVV et al., 2021), the *ICT Competency Framework for Teachers* (UNESCO, 2018), *Education for Sustainable Development Goals Learning Objectives* (UNESCO, 2017), DigCompEdu (Redecker, 2017), the UNESCO *AI Competency Framework for Teachers* (UNESCO, 2024) and ISCED definitions (UIS, 2012).

- *Flexible and adaptable*, DELTA supports educators with diverse knowledge, skills, attitudes and contexts. The framework emphasizes initiating professional learning, cultivating curiosity about digital empowerment and building the capacity to learn continuously about evolving technologies. Policymakers and programme developers can also integrate DELTA into existing qualifications or programmes, or combine it with other frameworks and training through customization.

The remainder of this section discusses the conceptual framework of DELTA, which presents a lifelong learning approach to developing digital competencies for adult educators, and identifies elements for further customization.

The framework begins with the professional identity of the adult educator and how it is shaped by four core principles (see *Box 1*): reflection and self-awareness, application, inclusion, and ethics and freedoms. The section *Growth stages* explains how educators identify which digital competencies are most relevant and how they can map strategies to achieve their goals, fostering self-directed learning along the way. Educators who are just starting out in their careers or those just beginning to use technology in their practice may need more support and guidance than educators with more established teaching experience.

Finally, this report presents four interlinked digital competence domains of practice: instructional practice, digital empowerment, MIL and transformative practice. These domains group the competencies presented in *Appendix 1*.

Core principles

The core principles of the DELTA framework are (1) reflection and self-awareness, (2) application, (3) inclusion, and (4) digital ethics and freedoms. They operate at multiple levels –international, national and individual. At the international level, the principles provide a common foundation rooted in SDG 4, RALE and the *Universal Declaration of Human Rights* (UN, 1948). At the national level, their interpretation may vary; for instance, 'inclusion' might emphasize accessibility in response to specific digital inequalities or educational priorities. At the individual level, an educator might instead focus on inclusive practices relevant to their learners and teaching context.

Crucially, digital competence encompasses a reflective, ethical, inclusive and transformative approach to using technology in adult education – one that acknowledges shared principles at the international level but requires educators to embody them meaningfully in their practice for real impact.

Reflection and self-awareness: Adult educators reflect on their unique educational experience, understanding how these shapes their worldview, motivations, beliefs and identity as educators as well as their use of digital technology in both local and global contexts. This self-awareness enables them to set meaningful goals for their learning and practice.

Application: Adult educators mindfully select and apply digital technologies and tools in context, drawing on lifelong learning practices to monitor and adapt to technological innovations. They align these choices with their own needs and values, as well as those of their learners and communities.

Inclusion: Adult educators adopt inclusive approaches to education and practise inclusion both in their teaching and in their use of digital technologies, locally and in the wider world.

Digital ethics and freedoms: Adult educators adopt the principles and practices that guide the responsible use of technology in teaching, while safeguarding learners' rights, well-being and autonomy in digital spaces. They use digital resources and technologies ethically to benefit learners, promote equitable access and foster appropriate digital practices in their educational contexts.

Source: Authors

Reflection and self-awareness

Reflection and self-awareness are established as the first core principles because they represent foundational values that inform instructional practice across diverse adult education contexts. They encompass both the mindset and practice associated with established theories of adult learning, recognizing that meaningful learning requires critical examination of one's assumptions, experiences and knowledge construction processes (Brookfield, 2009a). As Klein (2024, p. 200) has argued, 'to be reflexive is to take account of oneself, to critically reflect by considering what one knows, how one knows it, and how it might be known differently.' Mezirow's (2008) transformative learning theory, while also emphasizing the challenge of assumptions, focuses on how individual adult learners undergo perspective transformation through critical reflection, leading to fundamental changes

in their worldviews and actions. According to Mezirow, the ways in which educators reflect on their values forms the basis for meaningful behavioural change. Establishing reflection and self-awareness as core principles therefore creates space for diverse approaches to andragogy and varied epistemologies to flourish. They also enable educators to build on their strengths, rather than feeling they must abandon established expertise to adopt new technologies.

For adult educators, reflection and self-awareness involve recognizing how adult learners construct knowledge (Knowles, 1980) – similarly or differently to themselves – and in digital settings (Wildemeersch & Jütte, 2017). These principles also highlight the organizational and contextual requirements and constraints that shape learning experiences (Bierema et al., 2023), which may be particularly pronounced in technology-integrated learning. Furthermore, the increased use of technology can create emotional challenges, making it important for educators to develop strategies for maintaining well-being in digital educational contexts (Selwyn & Facer, 2013; Serrano-Puche, 2015). Reflection also prompts educators to consider how digital tools can both support and complicate interpersonal dynamics in blended learning environments (Garrison & Kanuka, 2004).

Application

Application as a core principle highlights the importance of action and implementation in digital competence development. Knowing about technology does not always translate into effectively using it to support adult learning. Applying and experimenting with digital tools and methods, and critically assessing their impact and appropriateness in adult learning contexts, are essential for professional development (Selwyn, 2016).

Hands-on learning through experimentation has been shown to strengthen teachers' motivation and confidence to use technology in their teaching (Hartsell et al., 2010), consistent with theories of teacher self-efficacy (Pfitzner-Eden, 2016). Burns and Kurtoğlu-Hooton's (2016) international action research study demonstrated how cycles of planning, action and reflection enabled teachers to make gains across a range of personal, pedagogical and technology-related dimensions. This suggests that when educators consistently apply professional learning about digital competencies in their practice, they develop more nuanced understandings of appropriate technology integration.

Given the scope and pace of technological innovation, learning how to apply new technologies through self-directed learning and professional development is crucial (Curran et al., 2019; Uzorka et al., 2023). Developing a habit of application prepares educators to respond to future technological developments that may reshape education in unforeseen ways.

Inclusion

Inclusion is a core principle for technology-integrated adult learning, aligning with SDG 4, which commits to ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all (UN DESA 2025). This principle emphasizes that all adults, regardless of physical ability, socio-economic status, gender or cultural background, should have equal access to learning opportunities.

Digital technologies can be a pathway to inclusion, as highlighted in UNESCO's revised guidelines, which note that open and distance learning (ODL) can enhance educational access for people with disabilities by overcoming physical, geographical and social barriers (Chambers & Varoglu, 2023).

However, technology-integrated adult education must be designed and delivered to be accessible, adaptable and responsive to diverse learner needs, ensuring that digital education becomes a tool for empowerment and equality rather than a source of further marginalization.

Digital ethics and freedoms

Ethics and freedoms have emerged as core principles across UNESCO (2022) and UN (2021, 2024) recommendations, reflecting the profound impact of digital technologies on all aspects of human life and society. These recommendations emphasize that, as the world becomes increasingly digitized, fundamental human rights, dignity and freedoms must be protected and promoted in digital environments. They stress that digital technologies, while offering new opportunities for human progress, also pose challenges to human agency, safety, well-being and equality.

Across international recommendations, digital ethics and freedoms includes ensuring universal access to the internet and digital technologies, protecting privacy and personal data, promoting freedom of expression online, combating discrimination and bias in digital systems, ensuring transparency and accountability in AI and algorithmic decision-making, and preserving digital heritage.

At the national level, these principles invite interpretation and customization to align with legal frameworks, adult education priorities and cultural contexts. For instance, some countries may prioritize data sovereignty, others algorithmic transparency or accessibility. These variations create a dynamic between international standards and national frameworks. Adult educators need to be aware of these tensions, understanding how international standards and their own ethical perspectives operate in practice.

Embodying this principle may involve observing how technology reinforces or addresses inequalities or considering how teaching approaches can respond to diverse learner needs in online environments.

Without collaborative efforts to include adult educators meaningfully in discussions on ethics, most countries and educators will continue to have limited influence over technologies shaped by a small group of powerful companies. The principle of ethics and freedoms highlights the active role that both nations and educators have in shaping how technology is designed, implemented and regulated in adult education contexts, ensuring that diverse perspectives inform how digital tools serve adult learning safely and ethically.

Growth stages

The DELTA framework adopts a perspective on digital competence development that draws on adult learning principles. Self-directed learning models tend to recognize the unique characteristics that distinguish adult learners from children. Knowles (1975) argued that adults bring life experiences and are more likely to be motivated by applying learning to improve their lives or careers.

Morris's (2024) four-dimensional model demonstrates self-directed learning as an important meta-competence, comprising: (1) control of the learning process, whereby learners assume primary responsibility for objectives and methods; (2) contextual factors that influence learning possibilities; (3) learner characteristics, such as intrinsic motivation and self-direction tendencies; and (4) responsibility for proactive meaning-making. A recent meta-analysis of 42 studies found that self-directed learning has a moderately positive effect on achievement in online learning by (Doo & Zhu, 2024). Similarly, a

systematic review of health professionals reported moderate gains in knowledge domains associated with self-directed learning (Murad et al., 2010). Together, these findings suggest that learners who set their own goals, select learning methods and monitor their progress may achieve better outcomes than those who rely on less self-directed approaches.

Digital and mobile technologies are particularly well suited to supporting self-directed learning, enabling just-in-time learning and enhanced access to information. This is especially valuable for professionals in rural or remote communities, who can remain up to date and address learning needs as they arise in practice (Curran et al., 2019). Self-directed learning has therefore been adopted in DELTA because of its potential to enable adult educators to develop autonomy and ownership over their professional development, while also preventing the obsolescence of skills and knowledge as technologies evolve.

However, there is an important tension between these aspirational ideals and how self-directed learning is implemented in adult education contexts. Morris and Rohs (2021) found that digital technologies tended to create a paradoxical situation in which they simultaneously enable self-directed learning through access to information and demand higher levels of information literacy skills to navigate effectively. Those lacking confidence to use the internet may feel overwhelmed by information abundance, particularly when educational support is absent. Cultural and institutional factors also present challenges, particularly in educational systems where curricula are set by institutions or when educators perceive their role as that of knowledge transmitters rather than facilitators (Nasri, 2019; Zulfikar, 2009). For example, Nasri's (2019) study of Malaysian educators demonstrated how educators were often reluctant to modify their professional identity to adequately support self-directed learning in students due to beliefs about teaching or the respect accorded to authoritative figures.

These challenges highlight the need for explicit developmental scaffolding when embedding self-directed learning into adult education frameworks. For DELTA, we draw on Grow's (1991) self-directed learning model, which suggests four growth stages that capture the non-linear relationships between educators and their learning processes. *Figure 1* depicts these stages, showing how educators may require different levels of guidance as they progress.

Adult learning theories suggest that progression is often non-linear, highly individualized and potentially transformative (Illeris, 2009). Theorists collectively argue that significant adult learning involves fundamental shifts in meaning-making and perspective, diverse pathways of competence development, and contexts shaped by personal, social and cultural experiences (ibid.). Such learning is often fostered through guided and structured support, which can eventually lead to educators independently managing their own learning (Grow, 1991).

These growth stages can thus serve as reflective tools rather than as competitive or high-stakes assessment mechanisms, potentially providing educators with a shared language to understand their digital competencies and to identify meaningful learning opportunities relevant to their contexts and needs. These stages can also help mitigate some of the challenges of implementing self-directed learning noted above. However, as Curran (2019) and Nasri (2019) demonstrated, various personal, professional and environmental factors may influence developmental progression. For this reason, the core principles (reflection and self-awareness, inclusion, ethics and freedoms, and application) and the domains of practice (instructional practice, digital empowerment, media and information literacy, and transformative practice) are deliberately interlinked and should not be considered in isolation.

Figure 1: Growth stages of an educator

Choosing what to learn
Self-directed learning suggests educators identify their own learning needs and goals. Though goals can be suggested, developing reflection skills is the essential first step for educators.

Self-directed educators
At this level, educators set their own learning goals, create appropriate technology-integrated opportunities, and influence technology in their adult education context through self-motivated reflection and action.

Guided educators
At this level, educators are developing foundational knowledge and beginning to incorporate digital tools in a guided fashion.

Interested educators
Educators are building confidence to set goals and integrate digital technologies in teaching, with some support needed.

Involved educators
Educators develop digital competencies independently by setting their own goals and learning methods, needing only occasional guidance rather than direct teaching.

Source: Authors, based on Grow's (1991) self-directed learning model

Figure 1 demonstrates how programme designers can identify an educator's growth stage in order to support them in setting appropriate learning objectives, determining the level and type of guidance required, and selecting suitable teaching and learning approaches. This process is exemplified using one of the DELTA competencies. Grow's (1991) model was originally conceptualized from the perspective of an educator adopting various roles to cultivate self-directed learning competence in learners. In response to the resource constraints and limited professional development opportunities faced by adult educators globally, DELTA provides this support through a diagnostic tool, reflective questions and assessment-for-learning activities embedded in its self-learning modules. For programme designers, DELTA also offers guidance for facilitators on how to customize prompting questions to scaffold the development of self-directed learning competence effectively (see *DELTA resources* for further details).

Recognizing competence development

In assessing competence development through self-directed learning approaches, Brookfield (2009b) emphasized the importance of context-sensitive evaluation methods that account for diverse learning settings and purposes. The situated and context-specific aspects of adult education and lifelong learning are crucial in competence assessment (Andersson & Fejes, 2013; Bjornavold, 2000). In a review of 12 European countries, Colardyn and Bjornavold (2004) found that the assessment of non-formal and informal learning depends heavily on clearly defined standards, learning modules and reliable tools with established validity and robust procedures. While various assessment methods can be applied across formal, non-formal and informal learning contexts, using multiple evidence-collection methods is often necessary to ensure robust and comprehensive evaluation processes (Colardyn & Bjornavold, 2004).

Portfolio-based assessment and recognition of prior learning (PLAR) frameworks are commonly recommended (Chisholm & Reinartz, 2025; Friesen & Wihak, 2013; Kardos et al., 2009), as they accommodate diverse evidence sources and learning pathways characteristic of adult education, while maintaining sufficient rigour for credible competency validation (Guder, 2013). However, when the pace of technological change renders particular skills obsolete before assessment frameworks can be developed and validated, or when digital tools and practices evolve rapidly, even the most context-sensitive evaluation methods struggle to remain current and relevant.

For this framework, readiness indicators (see *Appendix 3*) are introduced as an adaptive evaluation approach aligned with Grow's (1991) self-directed learning model. The notion of measuring readiness for self-directed learning was first proposed by Guglielmino (1977), who developed a scale focusing on self-directed learning readiness. Similarly, Saks and Leijen (2014) conducted a review of 30 empirical studies on how self-directed and self-regulated learning were measured in e-learning contexts, finding that self-report measures dominated data collection, despite growing concerns about their validity for capturing dynamic learning processes.

The DELTA readiness indicators are therefore not intended to measure knowledge and skill acquisition, nor to capture self-directed learning with precision. Instead, they help educators and policymakers identify the stage of self-directed learning at which individuals are situated in relation to a specific DELTA competence – whether they require guidance, are interested, are actively involved or are fully self-directed. This approach recognizes that the ability to self-direct one's learning is a more stable and valuable asset than mastery of any single digital tool or platform. At the same time, readiness indicators enable both policymakers and educators to determine the appropriate support and scaffolding requirements based on individual developmental needs.

Member States are encouraged to align DELTA learning and development with national competence frameworks or qualification standards. Additional guidance will be available in the forthcoming 2026 DELTA series customization guide for policymakers.

DELTA competence	Choosing what to learn	Planning how to learn	Examples
I can identify, describe and troubleshoot technologies used in adult education	Educators ask themselves: Can I do this? If so, how? If not, why? Choosing what to learn involves setting goals that reflect each educator's personal growth stage.	Once an educator has set their own learning goals, the next step is to plan how to achieve them.	The kinds of learning and assessment that support educators at each stage of self-directed learning differ.
Guided educator	A guided educator may not feel confident that they are familiar with many technologies used in adult education and may worry about being able to identify or describe them. They are likely to struggle to decide what to learn independently.	Guided educators often require significant guidance or coaching at this stage. They may lack the confidence to begin learning independently or may resist the changes that digital competency development entails.	A guided educator may benefit from in-person instruction, beginning with units that provide general overviews and basics. Individual coaching can help them overcome fear, anxiety or resistance, and guide them through hands-on application exercises.
Interested educator	An interested educator has some knowledge of, or experience in using, technologies for adult education, but may not feel confident about troubleshooting issues, or may wish to learn about new technologies they have not used before. They may still need guidance in choosing what to learn or in applying technology within their instructional practice.	Interested educators may bring enthusiasm and curiosity about technology, but could also hesitate to use technologies they are unfamiliar with. They may nonetheless be motivated to support their learners or to advance professionally. These educators benefit from encouragement to move beyond their comfort zone and from support in setting specific goals and strategies that build on their interests and align with their context.	An interested educator may be able to learn through an online facilitated programme, starting with units on topics relevant to their context, such as using collaborative learning technologies in teaching. Beginning each unit with reflective questions can help spark curiosity and connect learning to their interests.

Table 1: Example of support needed for educators to progress through the growth stages of one DELTA competence, adapted from Grow (1991)

| Involved educator | An involved educator is fairly confident in using and troubleshooting technologies for adult education and is able to decide what they want to learn more about. At times, they may benefit from feedback to encourage them further or to suggest areas of professional learning they had not previously considered. | Involved educators may be ready to explore topics of interest independently, such as learning to use and troubleshoot a new technology, often through application and experimentation on their own. | An involved educator may be ready to learn independently online. They may wish to focus primarily on assessments for learning that challenge them to apply digital competencies in their current instructional practice. |

Digital competence domains of practice

The DELTA framework includes four digital competence domains of practice: instructional practice, digital empowerment, media and information literacy and transformative practice (*Figure 2*). These domains identify specific areas where the core principles and competencies can be practised and applied in adult education.

> *Whereas the core principles establish the values that guide digital competence development, these domains represent the concrete areas in which these principles manifest in an educator's practice.*

While the core principles establish the values that guide digital competence development, these domains represent the concrete areas in which these principles take shape in educators' practice. Each domain represents a significant aspect of an adult educator's role in facilitating technology-enhanced learning. However, there is no prescribed path or sequence for competence development: the domains are interlinked and can be combined in different ways. They may therefore be seen as a road map that can be navigated according to different routes and goals.

Figure 2: DELTA's four domains of practice

Instructional practice
Technology integration within adult education

Media & information literacy
Critically access, evaluate and create information and media content

Digital empowerment
Critical engagement with technology

Transformative practice
Acting on professional development and digital transformation opportunities

Source: Authors

Instructional practice

The first domain, instructional practice, covers core teaching and facilitation for technology integration in adult education, which are central to all frameworks reviewed (e.g. Pennsylvania Department of Education, 2023; Redecker, 2017; SkillsFuture, 2018). However, the level of technology integration within instructional practice competencies varies and is often only implied. For example, Singapore's SkillsFuture framework (2018) incorporates the design, assessment and integration of suitable learning modes, implicitly including technology-enabled learning.

It is also common across digital competence frameworks to assume that educators have some pre-existing knowledge or experience of instructional practice. For this reason, a digital competence framework for adult educators should focus primarily on guiding professional growth by building on existing knowledge and experience, in line with a lifelong learning approach. The DELTA instructional practice domain adopts this perspective.

Nevertheless, Zepke and Leach's (2002) study with Māori – the Indigenous people of New Zealand – demonstrates how even experienced educators can select inappropriate technologies if they fail to consider learners' cultural contexts. Their initial distance-learning approach conflicted with Māori preferences for group work, holistic learning and face-to-face interaction, leading them to replace online learning with a video-based discussion system that better aligned with learners' needs (Zepke & Leach, 2002).

The instructional practice domain therefore helps educators to focus on learners' needs and to critically examine underlying assumptions about teaching and learning in adult education, particularly in relation to technology.

Digital empowerment

Approaches to engaging with technology vary across digital competence frameworks for educators. Some do not include a domain focused solely on digital competence, while others concentrate on technology within learning contexts (e.g. Pennsylvania Department of Education, 2023) or on career development for learners (e.g. Skills Future, 2018). DELTA includes digital empowerment as a core domain because of the profound impacts – both positive and negative – of digital technology on all aspects of adult learning, as well as on our lives, livelihoods and society.

Educators need to develop competence to engage with these impacts, beyond using technology as a tool or acquiring specific skills for learning contexts. Rather, the emphasis on empowerment seeks to enable educators to critically engage with digital technologies, make informed choices and leverage them for their own and the learners' benefit. Digital exclusion, online safety and the rapid pace of AI innovation also profoundly influences adult learning. By focusing on empowerment rather than specific uses or skills, DELTA aims to prepare educators to address these challenges and adapt to ongoing change.

Digital empowerment is not yet well defined, and few scholars have engaged directly with the concept. Mäkinen (2006) described it as a transformative process that enables citizens to become influential societal participants through digital means. Akkoyunlu et al. (2010) emphasized not only the acquisition of digital skills but also their effective use. Smolarczyk and Kröner (2023) examined the empowerment potential of digital maker tools – technologies that allow users to design and create, such as coding platforms, robotics kits and 3D printers – in learning contexts. Their findings raised important questions about whether such tools foster autonomy and creativity, or whether learning

to use such them merely facilitates adaptation to technology. This tension – between technology as a means of liberating learners to shape society and as a mechanism for equipping them to function within existing technological parameters – underscores why empowerment is central to digital competence.

The process of empowerment may not rely solely on individuals but also on collective power, expressed through meaningful collaboration (Friedmann, 1992). In the context of technology, empowerment can refer to the design of technology, how it is used, the influence of context on access and use, and the way interaction with technology shapes empowerment outcomes (Bentley, 2017). As noted in the Glossary, the UN's study on empowerment demonstrates that the concept carries great depth and importance across Member States, with multiple rich interpretations (UN DESA, 2012). This diversity implies that individuals and communities can shape its meaning in different contexts, which is vital in the context of adult education.

In this light, digital empowerment refers to the process of enhancing individuals' and communities' capacity to access, understand, create and use digital technologies effectively to improve their lives, participate fully in society and shape their digital environments.

Media and information literacy

Another crucial component underpinning digital empowerment is the third domain, media and information literacy (MIL). MIL equips individuals with the ability to critically access, evaluate and create information and media content, fostering informed decision-making, democratic participation and intercultural understanding (UNESCO, 2013). In the context of adult education, MIL is especially important, as it supports lifelong learning, enhances employability and enables adults to engage meaningfully in civic life (Koltay, 2011; McDougall, 2019). Adult educators themselves benefit from MIL competencies, enabling them to model critical information practices, such as helping learners develop the analytical skills needed to distinguish credible sources from unreliable content (Tisdell & Thompson, 2007; Vuojärvi et al., 2021). This is particularly important given that many adults may have had limited exposure to formal MIL education during their initial schooling, making adult educators key facilitators in developing these essential skills (Rasi et al., 2021).

Furthermore, MIL competence among adult educators is essential for addressing the ways in which digital access and information inequality affects learners differently. Some adults may have limited access to technology, while others may encounter limited online information related to their culture, interests or employment opportunities (Livingstone et al., 2005). Learners at risk of marginalization are also more likely to be disproportionately impacted by misinformation and disinformation (Cover et al., 2022; Jackson & Lucas, 2024). Adult educators with strong MIL skills can better support learners not only in developing technical proficiency but also in building the critical thinking needed to navigate information ecosystems responsibly (UNESCO, 2013). In this way, MIL helps bridge digital and knowledge divides, enabling adults to access, interpret and use information critically to improve their personal, professional and community lives, thereby reinforcing digital empowerment and promoting more equitable participation in digital society.

Transformative practice

The fourth domain of the DELTA framework emphasizes transformative practice, combining transformative learning for professional development with digital transformation to address the power dynamics that shape lifelong learning and opportunities for technology adoption. Transformative practice recognizes the broader social and cultural context of adult education, in which adult educators develop strong professional identities as agents of change rather than solely as instructors. Transformative learning theory, introduced by Mezirow (1978), provides a framework for understanding how adults fundamentally change their perspectives by reflecting on the underlying beliefs and assumptions that shape how they view and interpret the world. This critical examination may occur in different ways: when solving a problem, engaging in dialogue with others or reflecting individually on their ideas and beliefs (Mezirow, 2008). Transformative learning enables educators to re-examine their professional identity, their practice and their relationships within the field (Cranton & Taylor, 2011). Through transformative learning, adult educators are encouraged to reimagine what effective teaching looks like in technology-enabled adult education, challenging existing paradigms and developing new professional identities (S. Brookfield, 2009a). Wang, Torrisi-Steele and Reinsfield (2021) demonstrated that technology can foster transformative learning when integrated within appropriate epistemological approaches rather than used merely for convenience. The transformative practice domain therefore encourages educators to reflect on their instructional and technological approaches as both a means and an outcome of professional development.

At the same time, digital transformation, originating in business and organizational studies, focuses on leveraging digital technologies to create fundamental changes in processes, structures and value creation (Kraus et al., 2021; Matt et al., 2015). Applied to education, this concept has produced mixed results. Bernhard-Skala (2019) noted that research has predominantly focused on learning and teaching at the micro level without examining the organizational conditions needed for successful technology integration. In educational contexts, only a few scholars have examined digital transformation through critical pedagogical lenses (Servage, 2008) or through transformative praxis frameworks for inclusion (Price & Fox, 2023). Nicolás-Agustín, Jiménez-Jiménez and Maeso-Fernandez (2022) argued that innovative work behaviours are crucial to implementing digital transformation processes effectively. In adult education, which operates across diverse formal and non-formal settings, educators cannot always rely on institutional change initiatives to drive digital transformation. Supporting educators to develop competencies that enable them to identify and contribute to long-term strategies for positive digital transformation in their communities is therefore essential.

Utilmately, both individual and community-centred orientations to professional development are essential in adult education. Transformative learning can be understood as movement between social practices, where learners navigate different community contexts (Hodge, 2014), while also requiring recognition of participants' intersectional identities and community memberships (Price & Fox, 2023). Crucially, educators are positioned closest to adult learners and may best understand the risks and concerns adults face in relation to digital transformation. This suggests that, while educators are strategically placed to inform institutional and community-centred digital transformation strategies based on their understanding of learners' needs and concerns, they require support to bridge individual transformative learning processes with wider community-level digital transformation initiatives (Bernhard-Skala, 2019). The transformative practice domain therefore focuses on the knowledge, actions and opportunities that enable educators not only to strengthen their professional development through technology but also to support digital transformation within adult education.

Table 2 provides an illustrative example showing how transformative learning and digital transformation are linked within the transformative practice domain.

Transformative practice component	Example: Challenging adult education policy for rural learners
Initial problem/assumption	Education policy mandates that all adult education courses must be delivered face to face. The assumption is that in-person learning is always more effective and ensures quality education and participation.
Critical reflection process	The educator examines underlying beliefs: - Where does this assumption come from? - Is it based on educational research or institutional tradition? - What about learners who travel more than two hours each way?
Community of practice dialogue	Educators share experiences through professional networks, discussing challenges rural learners face, such as transportation costs, work schedules, family responsibilities and job pressures.
Challenging existing practice	The educator questions whether physical presence is necessary, exploring research on blended learning effectiveness. They begin to recognize that current policy may exclude, rather than include, many adult learners.
Professional identity shift	The educator embraces a new role as an advocate for rural learners, taking the initiative to develop blended or online learning options.
Collective action for change	The educator collaborates with colleagues to gather data on rural learner needs, designs pilot blended programmes and presents evidence-based proposals to the administration for policy revision.
Digital transformation outcome	The institution adopts a flexible delivery model, allowing hybrid attendance and supporting online education through the development of a learning management system.
Ongoing professional development	The educator reflects on the competencies gained in online facilitation and decides to pursue further learning on evaluating the effectiveness of technology integration.

Table 2: Illustrative example of how transformative practice may unfold

Source: Authors

Summary

Figure 3 presents the DELTA framework as a learner-centred model, with the educator at its core, directing their digital competence development. Three text boxes on the left explain the framework's key components – domains of practice, growth stages and core principles. The overall design emphasizes that growth begins with the educator, extends through their relationships with learners and their environment, and ensures that digital competence development responds to the adult education context.

At the bottom of *Figure 3*, the core principles are illustrated through guiding questions that prompt educators to consider how they embody reflection and self-awareness, ethics and freedoms, inclusion and application in their technological practice, accompanied by imagery of learners and their environments. The four overlapping coloured petals represent the domains of practice: instructional practice (yellow), digital empowerment (blue), media and information literacy (purple) and transformative practice (green). The questions included in *Figure 3* are illustrative rather than comprehensive; a complete list of competencies is provided in *Appendix 1*.

Figure 3: Conceptual overview of the DELTA framework

Digital empowerment for lifelong learning & transformative andragogy

DOMAINS OF PRACTICE
Four domains of practice: instructional practice, digital empowerment, media & information literacy and transformative practice outline digital competence areas of the DELTA framework. Sample modules are provided aligned with these domains.

GROWTH STAGES
DELTA supports educators through cyclical growth stages where they reflect on their current digital competency level and needs, mapping out a learning plan that is relevant to them.

CORE PRINCIPLES
DELTA supports educators to embody core principles of reflection & self-awareness, ethics & freedoms, inclusion and application through self-directed learning tailored to their unique educational contexts and learner needs.

DIGITAL EMPOWERMENT
How should I decide which tools to use in my teaching?
How should I protect and empower my learners in digital enviornments?

MEDIA & INFORMATION LITERACY
How can I trust online information?
How can I address misinformation in my teaching?

INSTRUCTIONAL PRACTICE
How do I teach?
How do I use technology to facilitate teaching and learning?
How should I use new technologies to drive adult education?

TRANSFORMATIVE PRACTICE
How can I become a self-directed learner with technology?
How can I contribute to digital transformation?

MY GROWTH STARTS WITH ME

WHAT WOULD I LIKE TO LEARN?

HOW MUCH GUIDANCE DO I NEED?

MY LEARNERS

Reflection & self-awareness
Who am I?
What is my environment?
Who are my learners?

Ethics & freedoms
Why does technology create ethical risks in adult learning?

Inclusion
How might I use technology to make learning more accessible, and what concerns or risks emerge?

Application
How can I try out a technology and understand the impact on learning it has?

MY ENVIRONMENT

Source: Authors, created using Adobe Illustrator

DELTA resources

The DELTA framework includes a suite of resources[5] designed to meet the diverse needs of adult educators, policymakers and programme developers worldwide. Whether countries are seeking to customize the framework for national implementation or individual educators wish to enhance their digital competencies independently, the DELTA resources provide practical guidance on how to get started.

- **Educator guide:** Introduces adult educators to the framework's core principles and four domains of digital competence. It explains the purpose and structure of DELTA, its growth stages, and includes reflective guiding questions for each principle and domain.

- **Customization guide:** Provides countries and organizations with guidance on adapting the framework to specific contexts. It outlines areas for customization, including translation, conducting needs analyses, aligning with national frameworks and policies, consulting diverse stakeholders, prioritizing competencies based on educator needs, and selecting appropriate delivery formats.

- **Diagnostic:** A self-assessment tool that can be used independently by adult educators or integrated into professional development programmes as a starting point. It introduces the DELTA learning methodology, helps educators identify their own learning goals, and maps out the relevant units, modules and competencies associated with those goals.

- **Sample units:** Available in both self-learning and instructor-led open-access formats. Each unit begins with a reflection to help educators identify their specific learning needs and set meaningful goals aligned with their context and learners. Units also include practical activities and assessments for learning. They are organized primarily by domain of practice but can be mixed and matched or reordered across domains. Member States are strongly encouraged to customize these units, with guidance provided in the customization guide. All units are available as open education resources (OERs).

A full list of competencies is provided in *Appendix 1,* and sample units and topics mapped to DELTA competencies are presented in *Appendix 2.*

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[5] A customization guide for policymakers, an adult educator guide and a diagnostic development guide will be published as part of the DELTA series in 2026.

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Appendix 1: DELTA competencies

Instructional practice (IP) competencies

IP1. I can reflect on how my background and beliefs shape my teaching and use of technology.

IP2. I can adapt my teaching and use of technology to respect learners' cultural contexts.

IP3. I can design teaching, learning and assessments that integrate technology appropriately.

IP4. I can apply adult learning theories and use digital tools to support self-directed and experiential or project-based learning.

IP5. I can assess how technology affects learner well-being and inclusion.

IP6. I can manage teaching and learning records in a safe and ethical manner.

IP7. I can use data and feedback, supported by digital tools, to improve learning outcomes.

Digital empowerment (DE) competencies

Essentials	Advanced
DE1. I can assess my local technology context and develop digital empowerment strategies.	DE10. I can describe and select adaptive and assistive digital tools for learners based on cost and availability.
DE2. I can identify, describe and troubleshoot technologies used for adult education.	DE11. I can create differentiated instructional plans for diverse learner needs using digital technologies.
DE3. I can recognize the emotional challenges, such as fear or anxiety, that learners may experience when using technology.	DE12. I can assess the ethics and impact of immersive and wearable technologies.
DE4. I can create strategies for safe, inclusive online learning and promote digital citizenship.	DE13. I can explain and select relevant learning experience platforms (LPXs) and/or learning management systems (LMSs) for teaching.
DE5. I can use email and navigate the web safely.	DE14. I can interpret and visualize learner data where relevant.
DE6. I can understand copyright laws, locate useful OERs and explain what massive open online courses (MOOCs) are.	DE15. I can evaluate issues and biases in AI systems as they relate to education.

DE7. I can apply collaborative learning tools and create resources to encourage meaningful participation and engagement.

DE16. I can design AI-enabled learning experiences that empower learners.

DE8. I can implement interactive tools and facilitate effective online sessions.

DE17. I can reflect on how AI affects self-directed learning and decide when to use it in teaching.

DE9. I can frame open-ended questions and prompts for traditional learning and for AI tools.

Media and information literacy (MIL) competencies

MIL1. I can reflect on my media sources, preferences and learning needs.

MIL2. I can identify risks and opportunities in digital platforms and develop strategies to use them responsibly.

MIL3. I can apply MIL principles to support digital learning and civic engagement.

MIL4. I can evaluate and respond to fake news, misinformation and hate speech using effective strategies

MIL5. I can explain digital privacy and adopt cybersecurity practices when using online platforms.

Transformative practice (TP) competencies

TP1. I can reflect on my strengths, challenges and goals to improve my teaching.

TP2. I can develop a personal plan for continuous self-improvement, using technology both as a means and as content for professional development.

TP3. I can identify and access online and hybrid professional development and networking opportunities aligned with my career goals.

TP4. I can build and maintain a digital community of practice for collaborative growth.

TP5. I can assess the impact of emerging technologies, such as generative AI tools, on my professional development.

TP6. I can use and guide technology to support the growth and development of my peers, learners and community.

Appendix 2: Sample units and topics mapped to DELTA competencies

Please note that the units will be released as OERs. They are designed to be modular, enabling mixing and customization according to the needs of specific adult education context. The tables of sample units and competencies provide an overview of how competencies can be mapped within teaching units.

Instructional practice (IP): Units and topics	Competencies addressed
IP Unit 1: How digital technologies can support adult learning principles and practices • Relationship between digital technologies and adult learning theory and practice • How learning theories shape the role of technology in adult education • Identifying adult learning policy and practice in your context	**IP1. I can reflect on how my background and beliefs shape my teaching and use of technology.** Adult educators critically examine how their own cultural background, learning experiences and beliefs about teaching shape their instructional practices and perspectives on technology's role in education. **IP2. I can adapt my teaching and use of technology to respect learners' cultural contexts.** Adult educators learn how different cultural learning philosophies (such as Confucian self-cultivation, African Ubuntu communalism or Latin American critical pedagogy) require fundamentally different technological approaches and implementations. **IP4. I can apply adult learning theories and use digital tools to support self-directed and experiential or project-based learning.** Adult educators explore how behaviourist, cognitivist and constructivist learning theories each suggest different roles and applications for digital technology.

Instructional practice (IP): Units and topics	Competencies addressed
IP Unit 2: Planning technology-enhanced adult education • Considerations for planning and design of technology-enhanced adult education programmes • Implementing and managing technology-enhanced adult education programmes • Monitoring and evaluation of adult education programmes	**IP2. I can adapt my teaching and use of technology to respect learners' cultural contexts.** Adult educators learn to identify and respond to their specific adult education and cultural context through the open and distance learning (ODL) four-step planning model, with particular emphasis on understanding how sociocultural positioning affects technology access, attitudes and engagement. **IP3. I can design teaching, learning and assessments that integrate technology appropriately.** Adult educators use templates to plan technology-enhanced programmes using the ODL model, matching technology choices systematically to learner needs, contexts and available resources, while considering implementation challenges. **IP5. I can assess how technology affects learner well-being and inclusion.** Adult educators identify and analyse how technology integration affects different learner groups, with particular focus on disadvantaged populations and strategies for addressing digital inequities and barriers to participation.
IP Unit 3: Creating inclusive and transformative technology-integrated experiences for diverse adult learners • The asset-based model of inclusive education • Bias awareness and self-reflection for adult educators • Universal Design for Learning (UDL) • Digital accessibility in online learning • Gender considerations in technology-integrated learning • Intersectionality in adult education	**IP1. I can reflect on how my background and beliefs shape my teaching and use of technology.** Adult educators critically examine their socio-cultural positioning and potential biases, demonstrating how these may impact their instructional practices in both online and face-to-face contexts, with particular focus on bias awareness and self-reflection skills. **IP3. I can design teaching, learning and assessments that integrate technology appropriately.** Adult educators apply UDL principles to create inclusive learning experiences that address diverse adult learner needs, paying special attention to differences between online and face-to-face learning and thoughtful technology selection. **IP5. I can assess how technology affects learner well-being and inclusion.** Adult educators differentiate between deficit- and asset-based models of inclusion, applying asset-based mindsets when addressing support needs and evaluating how digital tools promote or hinder accessibility and learner empowerment across environments.

Instructional practice (IP): Units and topics	Competencies addressed
IP Unit 4: Selecting and applying appropriate digital tools for adult education • How digital tools align with adult education approaches, including: o Self-directed learning o Dialogue and discussion o Experiential learning o Implementation and support strategies	**IP4. I can apply adult learning theories and use digital tools to support self-directed and experiential or project-based learning.** Adult educators explore how digital tools align with approaches such as self-directed learning, dialogue and experiential learning, analysing the interplay of technology, andragogy and learning resource design to select appropriate tools. **IP3. I can design teaching, learning and assessments that integrate technology appropriately.** Adult educators evaluate and apply digital tools such as word processors, messaging apps and generative AI, analysing their benefits and drawbacks for different learning approaches, while designing resources that integrate socio-emotional learning and foster belonging. **IP2. I can adapt my teaching and use of technology to respect learners' cultural contexts.** Adult educators critically analyse the appropriateness of tools for their learners, considering digital literacy levels, accessibility needs and cultural contexts.
IP Unit 5: Opportunities and challenges of using digital technologies within assessment • Assessment for learning and assessment of learning • Digital tools used for assessment • Digital tools to support assessment • Designing and implementing inclusive, safe and accessible technology-integrated assessment	**IP3. I can design teaching, learning and assessments that integrate technology appropriately.** Adult educators examine digital assessment tools and methods, recognizing their strengths, limitations and appropriateness for different contexts, while designing inclusive assessment strategies that accommodate diverse learner needs. **IP5. I can assess how technology affects learner well-being and inclusion.** Adult educators learn to design assessment strategies that consider digital literacy levels, accessibility requirements and cultural backgrounds, while evaluating how digital tools may create barriers or opportunities for different learner groups. **IP6. I can manage teaching and learning records in a safe and ethical manner.** Adult educators demonstrate responsible approaches to using digital tools for assessment, ensuring data privacy, fairness and transparency while fostering digital empowerment and lifelong learning.

Instructional practice (IP): Units and topics	Competencies addressed
IP Unit 6: Evaluating the effectiveness of technology integration in adult learning environments • Evaluating the impact of technology on adult learners • Evaluating the effectiveness of technology-integrated instructional practice • Understanding the effect of technology integration on adult education programmes	**IP7. I can use data and feedback, supported by digital tools, to improve learning outcomes.** Adult educators learn to interpret data and feedback, using digital tools responsibly to analyse learner outcomes and engagement through various evaluation methods, including surveys, learning analytics and action research approaches. **IP5. I can assess how technology affects learner well-being and inclusion.** Adult educators evaluate the broader impact of technology integration on learner well-being, social inclusion and social progress, moving beyond learning outcomes to consider confidence, satisfaction, belonging and empowerment. **IP1. I can reflect on how my background and beliefs shape my teaching and use of technology.** Adult educators engage in systematic reflection through action research cycles, examining how assumptions about technology influence instructional choices and evaluation, and developing collaborative inquiry and evidence-based improvement skills.

Digital empowerment (DE) essentials: Units and topics	Competencies addressed
DE Unit 1: A primer on technology in adult education • What is technology? • What is AI? • Opportunities and challenges surrounding digital technologies in adult education • Technology needs assessment for adult education	**DE1. I can assess my local technology context and develop digital empowerment strategies.** Adult educators learn to recognize the technological context of their local adult education environment and assess which technologies are available to both educators and learners through systematic needs assessment processes. **DE2. I can identify, describe and troubleshoot technologies used in adult education.** Adult educators develop a foundational understanding of what digital technology and AI are (and are not), enabling them to differentiate between various types of educational technologies and understand their basic functions and limitations. **DE3. I can recognize the emotional challenges, such as fear or anxiety, that learners may experience when using technology.** Adult educators explore how access to and use of technologies varies across different learner groups, developing awareness of factors that positively or negatively influence technology use, including emotional barriers and comfort levels.

Digital empowerment (DE) essentials: Units and topics	Competencies addressed
DE Unit 2: What is digital empowerment in the context of adult education? • Defining digital and AI literacy, and digital empowerment • The importance of digital empowerment • Promoting digital empowerment	**DE1. I can assess my local technology context and develop digital empowerment strategies.** Adult educators develop context-specific strategies to promote digital empowerment, fostering digital skills, confidence and critical engagement with digital technologies and AI systems that enable full participation in increasingly technology-driven societies.
DE Unit 3: Fostering digital citizenship • What is digital citizenship and why is it important? • Guidelines for respectful digital interaction and safe participation	**DE4. I can create strategies for safe, inclusive online learning and promote digital citizenship.** Adult educators analyse how digital citizenship extends beyond technology use to encompass data privacy, algorithmic influence and digital rights, while creating guidelines to address online safety challenges such as cyberbullying, trolling and fraud in ways that respect learners' diverse socio-cultural backgrounds. **DE3. I can recognize the emotional challenges, such as fear or anxiety, that learners may experience when using technology.** Adult educators develop strategies that promote a sense of belonging while balancing online safety with active participation, understanding how aspects of learners' identities may put them at greater risk of harm in online spaces.
DE Unit 4: Learning about technology and modelling good digital practice • Emotional aspects of learning to use technology • Computational thinking	**DE2. I can identify, describe and troubleshoot technologies used in adult education.** Adult educators learn to define and apply basic principles of computational thinking to problem-solving technology issues, while developing skills to identify and troubleshoot common challenges in adult education settings. **DE3. I can recognize the emotional challenges, such as fear or anxiety, that learners may experience when using technology.** Adult educators implement strategies to create supportive environments for learners facing technology challenges, including managing technostress and fostering a growth mindset.

Digital empowerment (DE) essentials: Units and topics	Competencies addressed
DE Unit 5: Analog technologies used in adult education • Radio • Radio programmes • Television • Television programmes	**DE2. I can identify, describe and troubleshoot technologies used in adult education.** Adult educators learn to describe the basic characteristics of radio and television, identifying opportunities and challenges of these resources in adult education. **DE1. I can assess my local technology context and develop digital empowerment strategies.** Adult educators develop skills to assess community access to analog technologies and create context-specific programming that addresses learning outcomes, including research into local broadcasting requirements, partnerships and delivery approaches.
DE Unit 6: Digital and internet-based tools and applications used in adult education • Downloading and installing apps and software • Text editing and word processing • Using email • Websites and navigating the internet • LMS, platforms and cloud-based technologies	**DE2. I can identify, describe and troubleshoot technologies used in adult education.** Adult educators develop a foundational understanding of digital technologies, learning to distinguish between applications and their potential uses in adult education through hands-on exploration and case study analysis. **DE5. I can use email and navigate the web safely.** Adult educators learn to describe the characteristics of technologies and applications – including computers, mobile phones, word processors, the internet and email – while developing practical skills to use email and browse the web safely.
DE Unit 7: Exploring OERs and MOOCs • Copyright laws and regulations • OERs • MOOCs	**DE6. I can understand copyright laws, locate useful OERs and explain what MOOCs are.** Adult educators learn to identify copyright laws and regulations relevant to their context, understand what MOOCs are, and find relevant OERs for their instructional practice, using, sharing and adapting resources appropriately with attribution practices.

Digital empowerment (DE) essentials: Units and topics	Competencies addressed
DE Unit 8: Using digital tools for collaborative learning • Setting up and using discussion forums, shared documents, collaborative mind maps • Structuring and facilitating online collaboration tasks • Considerations for motivation, assessment and inclusion	**DE7. I can apply collaborative learning tools and create resources to encourage meaningful participation and engagement.** Adult educators learn to use asynchronous tools such as discussion forums, shared documents and mind-mapping platforms, and design collaborative learning tasks that foster motivation and meaningful participation. **DE9. I can frame open-ended questions and prompts for traditional learning and for AI tools.** Adult educators learn to create engaging prompts that encourage meaningful participation and critical thinking, structuring questions that promote personal reflection and collaborative knowledge-building in asynchronous online environments.
DE Unit 9: Interactive tools and creating engaging videos • Understanding learner engagement • Interactive tools that enable real-time audience engagement (polls, quizzes, Q&A) • Video creation for online or flipped learning	**DE8. I can implement interactive tools and facilitate effective online sessions.** Adult educators learn to observe and measure engagement across learning environments, using interactive tools such as polls, quizzes and Q&A platforms to support participation. **DE7. I can apply collaborative learning tools and create resources to encourage meaningful participation and engagement.** Adult educators learn to create engaging videos for adult learning, applying design principles, editing techniques and accessibility considerations while incorporating interactive tools that address diverse learner needs and preferences. **DE14. I can interpret and visualize learner data where relevant.** Adult educators develop skills to interpret and visualize engagement data from interactive, analysing participation patterns and response trends to make informed adjustments to their teaching approaches.

Digital empowerment (DE) essentials: Units and topics	Competencies addressed
DE Unit 10: Online facilitation in synchronous sessions • Choosing an appropriate virtual classroom tool and features • Designing interactive online sessions • Meaningful participation in synchronous learning • Strategies for safe, inclusive and accessible sessions	**DE8. I can implement interactive tools and facilitate effective online sessions.** Adult educators learn to select and use appropriate online meeting tools to design and facilitate interactive sessions that promote meaningful engagement in synchronous environments. **DE4. I can create strategies for safe, inclusive online learning and promote digital citizenship.** Adult educators develop strategies to create safe, inclusive and accessible synchronous learning environments, addressing diverse learner needs such as multiple languages, varied digital competencies, different cultural backgrounds and technical limitations.
DE Unit 11: Generative AI essentials • Comparing and contrasting generative AI services for adult education • Developing effective prompts • Evaluating AI outputs	**DE2. I can identify, describe and troubleshoot technologies used in adult education.** Adult educators compare and contrast generative AI services, understanding their capabilities, limitations and appropriate applications while developing strategies for accessing and using these tools effectively for instructional practice and professional development. **DE9. I can frame open-ended questions and prompts for traditional learning and for AI tools.** Adult educators learn to create effective prompts for generative AI, understanding how different prompting strategies affect output quality and how to achieve better results for educational purposes. **DE15. I can evaluate issues and biases in AI systems as they relate to education.** Adult educators critically reflect on AI outputs in terms of alignment with intended goals and appropriate cultural representation, learning to think critically about AI in instructional practice.

Digital empowerment (DE) advanced: Units and topics	Competencies addressed
DE Unit 12: Adaptive or assistive technology for adults with support needs • What is adaptive or assistive technology? • Technologies for adult learners requiring specific support • Assistive hardware and software • Mobile device accessibility features	**DE10. I can describe and select adaptive and assistive digital tools for learners based on cost and availability.** Adult educators learn the key features of common adaptive and assistive technologies in adult education. They explore the range of hardware and software solutions available, considering their cost, practicality and suitability for diverse learner needs. **DE11. I can create differentiated instructional plans for diverse needs using digital technologies.** Adult educators design differentiated instruction plans that accommodate varying levels of support needs, adapting lessons with assistive technologies and linking UDL principles to appropriate technology solutions.
DE Unit 13: Wearables, virtual and augmented reality for experiential and reflective learning • Wearable technology in adult learning as reflection supports • Virtual reality for immersive experiential learning • Augmented reality for contextual experiential learning	**DE12. I can assess the ethics and impact of immersive and wearable technologies.** Adult educators learn to critically evaluate both the benefits and challenges of immersive technologies in adult learning, considering safe practice environments, engagement and authentic skill development, alongside issues of data privacy, digital inequalities and cost-effectiveness.
DE Unit 14: Learning analytics and learning experience platforms • What is learning analytics? • What are learning experiences platforms (LXPs)? • Ethical and privacy principles for learning analytics • Interpreting dashboards and creating visualizations of learner engagement	**DE13. I can explain and select relevant learning experience platforms (LPXs) and/or learning management systems (LMSs) for teaching** Adult educators learn the fundamentals of LXPs and LMSs and their role in adult education, understanding how these platforms combine content delivery, personalized learning and analytics to support diverse learner needs. **DE14. I can interpret and visualize learner data where relevant** Adult educators analyse and visualize learner engagement data using dashboards and spreadsheet software, developing skills in descriptive analytics, data interpretation and meaningful visualizations to inform instructional practice. **IP6. I can manage teaching and learning records in a safe and ethical manner.** Adult educators learn assess the ethical implications of collecting and using learner data, applying principles of data protection, privacy and responsibility when handling sensitive information.

Digital empowerment (DE) advanced: Units and topics	Competencies addressed
DE Unit 15: Responsible AI education • What is responsible AI education? • Ethical issues in AI • Critically engaging with the impacts of AI on our lives and society	**DE15. I can evaluate issues and biases in AI systems as they relate to education.** Adult educators analyse how AI systems are designed and deployed, exploring their potential to reinforce or challenge social inequalities and their implications for sustainability and inclusion in adult education.
DE Unit 16: AI applications for self-directed learning and instructional practice • Intelligent tutoring systems and generative AI for self-directed learning • Planning, designing and creating instructional strategies and materials • Designing assessments in the age of AI	**DE17. I can reflect on how AI affects self-directed learning and decide when to use it in teaching.** Adult educators explore how AI applications, such as tutoring systems and generative AI, may enhance or limit self-directed learning, helping them decide when and how to integrate these tools appropriately. **DE9. I can frame open-ended questions and prompts for traditional learning and for AI tools.** Adult educators practise creating prompts for generative AI to support content creation, lesson design and assessment, ensuring educational quality and alignment with targeted outcomes. **DE16. I can design AI-enabled learning experiences that empower learners.** Adult educators learn to use generative AI for creating learning content and designing assessments, ensuring alignment with adult education principles and fostering learners' critical thinking skills rather than dependence on AI tools.

Media and information literacy (MIL): Units and topics	Competencies addressed
MIL Unit 1: Media and information literacy in adult learning • Definition and importance of MIL in the digital age • Key adult learning principles and their connection to MIL • Understanding media influences and their societal impact • Critical analysis of media for informed decision-making • Applying MIL concepts in adult education	**MIL1. I can reflect on my media sources, preferences, and learning needs.** Adult educators examine their current information consumption patterns, identify gaps in their media literacy knowledge, and connect their information needs to adult learning principles. **MIL3. I can apply MIL principles to support digital learning and civic engagement.** Adult educators apply frameworks such as the CRAAP (currency, relevancy, authority, accuracy, purpose) method to evaluate resources. They explore how MIL supports both effective teaching and active citizenship.
MIL Unit 2: Mastering social media: Benefits, risks and business dynamics • Identifying social media risks and opportunities • Strategies to maximize benefits and minimize risks • Understanding social media business models and societal impacts • Analysing targeted advertising and algorithmic content curation • Privacy protection and data security measures	**MIL2. I can identify risks and opportunities in digital platforms and develop strategies to use them responsibly.** Adult educators analyse how business models and algorithms influence content exposure, developing strategies to leverage benefits for education and networking while mitigating risks such as privacy violations, misinformation and echo chambers.

Media and information literacy (MIL): Units and topics	Competencies addressed
MIL Unit 3: Empowering active and responsible citizenship on- and offline • Connections between MIL and active citizenship responsibilities • Role of social media in civic engagement and free speech • Introduction to citizen journalism: Opportunities and challenges • Case studies of social movements using digital platforms • Strategies for meaningful digital civic participation	**MIL3. I can apply MIL principles to support digital learning and civic engagement.** Adult educators learn to evaluate political information, assess citizen journalism, and support learners in engaging responsibly in democratic processes through digital platforms.
MIL Unit 4: Overcoming hate speech with socio-emotional literacy • International standards on hate speech and response strategies • Mindful and compassionate media consumption and creation • Socio-emotional learning (SEL) for combating hate speech • Integrating empathy, mindfulness and critical thinking in media interactions • Practical approaches to addressing online harassment and discrimination	**MIL4. I can evaluate and respond to fake news, misinformation and hate speech with effective strategies.** Adult educators learn to identify forms of hate speech online, understand international standards, and apply socio-emotional literacy to develop compassionate and effective responses.

Media and information literacy (MIL): Units and topics	Competencies addressed
MIL Unit 5: Digital literacy: Security, privacy and intellectual property • Common digital security challenges (scams, phishing, identity theft) • Digital data, traces and footprints • Principles of data privacy and their role in free expression • Intellectual property issues, including AI-generated content • Best practices for cybersecurity and privacy protection	**MIL5. I can explain digital privacy and adopt cybersecurity practices when using online platforms.** Adult educators learn to implement cybersecurity measures, apply data privacy principles and regulations, and navigate intellectual property issues in digital environments to protect themselves and their learners.
MIL Unit 6: MIL and navigating artificial intelligence and generative AI • Impacts of AI and generative AI on information ecosystems and democracy • Challenges and opportunities of AI technologies • AI bias, algorithmic transparency and ethical considerations • Detecting AI-generated misinformation and deepfakes • Governance approaches and the role of MIL in AI literacy	**MIL4. I can evaluate and respond to fake news, misinformation and hate speech with effective strategies.** Adult educators learn how AI affects information ecosystems, develop skills to detect AI-generated misinformation and deepfakes, and explore the democratic implications of algorithmic bias.

Media and information literacy (MIL): Units and topics	Competencies addressed
MIL Unit 7: Gender equality in online spaces • Online gender stereotypes and prevention measures • Online violence against women (OVAW) and responses • Policy intersections between diversity, equity and digital representation • Analysing gender representation in media and its impacts • Creating inclusive online learning environments	**MIL2. I can identify risks and opportunities in digital platforms and develop strategies to use them responsibly.** Adult educators learn to recognize online gender stereotypes, understand the impact of OVAW, design inclusive learning environments while examining how media representation shapes perceptions of gender, and explore policy approaches to promoting gender equality in digital spaces.
MIL Unit 8: Navigating digital media: Journalism vs disinformation • Value and principles of professional journalism • Definitions and differences between misinformation and disinformation • Impacts of false information on democracy • Strategies to detect and combat disinformation • Supporting independent journalism and media accountability	**MIL4. I can evaluate and respond to fake news, misinformation and hate speech with effective strategies.** Adult educators learn to distinguish professional journalism from disinformation campaigns, appreciate the value of independent journalism, and develop strategies to detect and respond to misinformation and disinformation.

Transformative practice (TP): Units and topics	Competencies addressed
TP Unit 1: What is transformative practice and why is it important? • Understanding transformative practice as a form of continuing professional development (CPD) • The importance of transformative practice and CPD • When and where professional development takes place • Integrating and planning transformative practice in daily routines	**TP1. I can reflect on my strengths, challenges, and goals to improve my teaching** Adult educators learn to critically examine their current practice, identify areas of strength and growth, and set meaningful professional development goals that align with their values and context. **TP2. I can develop a personal plan for continuous self-improvement that uses technology both as means and as content for professional development.** Adult educators learn to create structured professional development plans using frameworks like TPACK (technology, pedagogy and content knowledge), integrating technology as both a tool and subject of professional learning.
TP Unit 2: Reflective practice • What reflection is and how to reflect on teaching practice • Enhancing reflective practice with and on technology for adult education	**TP1. I can reflect on my strengths, challenges, and goals to my improve teaching.** Adult educators learn to implement systematic reflective practice, using self-assessment to examine their technology use and responsiveness to learner needs. **TP2. I can develop a personal plan for continuous self-improvement that uses technology both as a means and as content for professional development.** Adult educators learn to integrate digital tools to support reflection, integrating technology into both their reflective processes and professional growth strategies to enhance self-awareness and responsiveness to evolving learning needs and requirements.
TP Unit 3: Technology as a content and means for CPD • Selecting appropriate CPD activities • Resources for CPD	**TP3. I can effectively identify online and hybrid professional development and networking opportunities aligned to my career goals.** Adult educators learn to explore, evaluate and select online resources, assessing their alignment with professional development goals, learning preferences and contextual constraints. **TP6. I can use and guide technology to support the growth and development of my peers, learners or community.** Adult educators learn to share professional resources and contribute to collaborative knowledge-building, developing skills in identifying and curating opportunities that benefit their wider educational community.

Transformative practice (TP): Units and topics	Competencies addressed
TP Unit 4: Communities of practice • Defining communities of practice (COPs) • Features and examples • Using COPs effectively • Participating in or creating COPs	**TP4. I can build and maintain a digital community of practice for collaborative growth.** Adult educators learn to design, implement and sustain digital COPs, fostering collaborative relationships that promote shared learning and transformative practice among adult educators. **TP6. I can use and guide technology to support the growth and development of my peers, learners and community.** Adult educators learn to leverage digital tools and platforms to facilitate collaborative learning within COPs and to support the professional development of their peers.
TP Unit 5: Social media • Social media as a resource for transformative practice • Using social media responsibly • Social media as a collaborative tool for professional learning	**TP4. I can build and maintain a digital community of practice for collaborative growth.** Adult educators learn to leverage social media platforms to create and sustain COPs, developing skills in managing online interactions and professional connections. **TP3. I can effectively identify online and hybrid professional development and networking opportunities aligned with my career goals.** Adult educators learn to analyse and evaluate social media networks as sources of professional development, developing skills in searching for relevant communities, assessing the quality of shared content and engaging with professional networks.
TP Unit 6: Using generative AI for transformative practice • Using generative AI to engage with emerging ALE research and practice • Using generative AI for teaching scenarios and role-play • Developing responsible-use guidelines for lifelong learning	**TP2. I can develop a personal plan for continuous self-improvement that uses technology both as means and as content for professional development.** Adult educators learn to integrate generative AI responsibly into their professional development, for example by using generative AI to summarize research or testing practice scenarios. **TP5. I can assess the impact of emerging technologies, such as generative AI tools, on my professional development.** Adult educators critically evaluate generative AI for professional learning, examining quality, reliability and appropriateness of content, as well as implications for equity, sustainability and responsible use.
TP Unit 7: Digital transformation (under development)	

Appendix 3: Readiness indicators per growth stage for each domain

Instructional practice (IP)

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP1. I can reflect on how my background and beliefs shape my teaching and use of technology.	I draw on my teaching experience to notice how my background influences my instruction, and with guidance, I begin to explore how my beliefs shape my technology use.	I set small goals to explore how my experiences and beliefs affect my teaching with technology, sometimes seeking advice while experimenting with reflection strategies.	I systematically reflect on how my background and beliefs shape my technology use, applying reflection strategies consistently and engaging peers or mentors for feedback.	I continuously examine how my beliefs influence my teaching with technology, refining my practice independently.
Readiness indicators	• Identifies basic aspects of cultural background and personal learning experiences when prompted • Recognizes that personal experiences and beliefs influence teaching approaches and technology choices • Completes structured reflection activities about bias and assumptions • Acknowledges that perspectives differ and assumptions matter	• Actively connects experiences to teaching decisions and technology choices • Seeks resources on cultural influences and bias in education • Questions whether their current practices align with their beliefs and serves diverse learners • Shows curiosity about alternative approaches and how their positioning affects learner experiences	• Initiates peer discussions on belief-practice alignment and bias • Experiments with reflection methods and adapts practice based on collaborative inquiry • Seeks learner feedback on teaching effectiveness and challenges assumptions • Sustains engagement in reflective practice beyond course requirements	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP2. I can adapt my teaching and technology use to respect learners' cultural contexts.	I build on my cultural awareness, using templates to consider how cultural factors should influence technology choices.	I recognise the importance of culture, modifying my teaching with technology as I explore cultural considerations, seeking help when needed.	I consistently adapt technology-integrated instruction, collaborating with peers and learners to ensure inclusivity.	I confidently design culturally responsive lessons with technology, proactively updating methods and mentoring others.
Readiness indicators	• Identifies cultural learning philosophies when given examples • Recognizes cultural differences in learner groups and technology use • Follows provided templates/ frameworks to analyse cultural factors • Understands that familiarity affects tool acceptance and preferences	• Independently seeks information about cultural practices and learning preferences • Questions whether programme designs address cultural contexts • Shows curiosity about alterna- tive, culturally appropriate tools • Connects cultural factors to technology implemen- tation decisions	• Engages with learners to understand cultural perspectives on technology and adapts approaches accordingly • Experiments with culturally adapted approaches and seeks feedback • Advocates for cultural considerations in policy and practice • Sustains commitment to cultural responsiveness beyond course requirements	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP3. I can design teaching, learning and assessments that integrate technology appropriately.	I use frameworks and templates to incorporate technology into planning with structured support.	I explore ways to include digital tools in teaching and assessment, occasionally asking for help, as I become more motivated to learn about new methods and inclusive design principles.	I independently design and refine technology-integrated teaching and assessments, applying inclusive design principles.	I confidently develop technology-enhanced teaching and assessments, regularly updating my practice as new tools emerge and guiding others.
Readiness indicators	• Understands provided frameworks (e.g. ODL, UDL) and follows templates • Identifies types of digital tools and their functions • Evaluates tool appropriateness using given approaches • Recognizes that inclusive design benefits all learners	• Adapts frameworks to fit context • Seeks resources on integration and inclusive design • Questions whether approaches meet diverse learners' needs • Explores new digital tools and assessment strategies	• Creates original planning and assessment approaches that thoughtfully integrate digital tools • Experiments with tool combinations to improve outcomes • Seeks feedback from peers, learners and mentors about improving technology integration and takes initiative to improve practice • Redesigns lessons systematically using inclusive design principles	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP4. I can apply adult learning theories and use digital tools to support self-directed and experiential/ project-based learning.	I connect adult learning theories to teaching only with explicit instruction, relying on direction to use tools.	I explore links between adult learning theories and digital tools, trying simple project-based activities and asking for advice when needed.	I regularly apply theories to select digital tools for self-directed and experiential learning, planning mostly independently.	I confidently design self-directed, experiential or project-based activities with digital tools, continuously innovating and sharing with peers.
Readiness indicators	• Identifies adult learning theories (self-directed learning, dialogue/ discussion, experiential learning) when given examples • Recognizes alignment between tools and learning methods and theories • Follows demonstrations to use tools appropriately • Understands that theory should inform tool choice	• Independently researches theories and connects tools to principles • Questions which approaches work best in context • Explores combining/ adapting theories and tools	• Experiments with theory-based approaches and combinations of tools and learning methods • Analyses technology's impact on learning processes • Justifies choices in peer discussions using appropriate learning theories • Sustains engagement with exploring technology-andragogy connections	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP5. I can assess how technology affects learner well-being and inclusion.	I notice well-being and inclusion issues only when guided, relying on explicit frameworks or checklists.	I recognize how technology affects well-being and inclusion, looking for resources and learner perspectives to improve accessibility.	I independently evaluate how technology influences well-being and inclusion, adjusting based on feedback and analysis.	I proactively design and revise digital learning environments that enhance well-being and inclusion, updating my practice and mentoring others.
Readiness indicators	• Identifies barriers to technology access and learner well-being (cost, infrastructure, comfort levels) when prompted • Recognizes positive and negative impacts of technology • Follows frameworks and checklists to analyse needs and inclusion • Understands cultural affects on technology preferences	• Researches challenges faced by disadvantaged groups • Gathers learner perspectives on barriers and benefits to using digital tools • Questions adequacy of current support systems and technology choices • Considers unintended consequences of technology integration	• Designs strategies to support disadvantaged learners and prioritizes well-being when making decisions • Analyses impacts on groups and advocates for inclusion • Demonstrates ongoing commitment to monitoring and addressing barriers to inclusion	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP6. I can manage teaching and learning records in a safe and ethical manner.	I follow clear protocols to apply safe and ethical practices for digital learning environments and data management.	I set goals to improve data protection, seeking advice and resources on safety and ethics.	I manage technology use responsibly, checking for safety and ethical issues and collaborating with peers to refine approaches.	I confidently ensure digital learning environments are safe and ethical, anticipating issues and mentoring others.
Readiness indicators	• Identifies information needing protection • Recognizes privacy and ethical concerns in data use • Follows guidelines for safe management • Knows learners' rights on data and AI transparency	• Begins implementing protection practices and researching ethical guidelines relevant to their context • Seeks information about data protection laws, secure data storage, and management practices • Questions necessity of data collection and adequacy of safeguards • Shows concern for balancing educational improvement with learner privacy rights and ethical implications of automated systems	• Consistently applies data protection policies and practices in teaching • Creates/follows ethical guidelines that prioritize learner rights • Demonstrates sustained transparent and responsible data management • Actively seeks learner input on technology use in assessment and data-handling practices	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
IP7. I can use data and feedback to improve learning outcomes with the help of digital tools.	I follow structured approaches to collect and interpret digital data on learning.	I explore simple methods for gathering data and feedback digitally, asking for help to interpret results, and I'm beginning to see how this information can improve learning outcomes.	I independently collect and analyse data from digital tools, combining sources and seeking peer input.	I confidently use diverse data sources and feedback loops to refine strategies, leading others in data-driven decision-making and improvement.
Readiness indicators	• Understands formative vs summative evaluation • Identifies types of data (engagement, satisfaction, learning outcomes) • Recognizes that evaluation requires multiple perspectives (learner impact, instructional effectiveness, programme outcomes) • Follows provided frameworks for basic evaluation	• Designs evaluation methods suited to context • Seeks information on analytics and data interpretation • Questions adequacy of current evaluation approaches • Explores methods to improve instructional practice	• Implements multi-source evaluation techniques • Analyses data to identify patterns and improve practice • Makes evidence-based modifications to instructional practice • Engages colleagues in collaborative evaluation and improvement processes	

Digital empowerment (DE): Essentials

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE1. I can assess my local technology context and develop digital empowerment strategies.	I identify available technologies with guidance and rely on others to suggest digital empowerment strategies.	I set small goals to explore how technologies affect digital empowerment.	I independently research and evaluate my local technology context, drafting plans to empower educators and learners, consulting peers as needed.	I lead efforts to assess and leverage local technology resources, designing comprehensive strategies and guiding colleagues.
Readiness indicators	• Identifies basic local technology resources • Recognizes variation in access across groups/ contexts • Follows provided templates to conduct needs assessment • Understands that community factors shape integration • Distinguishes digital literacy vs digital empowerment • Identifies most accessible analog/digital options	• Gathers information on learner access/ preferences • Explores barriers affecting different groups • Seeks approaches to promote digital empowerment • Questions context-appropriate strategies • Begins researching specific local opportunities/ requirements related to digital and/ or analog technologies	• Conducts needs assessments with community input • Compares resources to learner needs • Drafts digital empowerment strategies with justification • Committed to moving beyond skills training to fostering learner agency and critical engagement	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE2. I can identify, describe and troubleshoot technologies used in adult education.	I follow step-by-step guides to fix simple issues, relying on mentors/ manuals.	I try trouble-shooting some issues, seeking guidance/ confirmation when unsure.	I routinely diagnose and solve common problems, consulting peers/ experts only for complex challenges or technical issues.	I independently manage a wide range of technical issues, adapting my approach as new technologies emerge and training others in effective troubleshooting strategies.
Readiness indicators	• Categorizes educational technologies by type/ function • Understands that techno-logy effective-ness depends on learner needs and educational context • Notes varying strengths/ limitations/ uses of digital tools • Identifies basic implementation requirements	• Explores how tools support approaches/ contexts • Investigates accessible/ appropriate technology for learners • Seeks trouble-shooting methods when technologies do not meet learner needs or expectations	• Matches tools to learner/ context requirements • Conducts needs assess-ments to determine appropriate solutions • Identifies technologies that consider accessibility/ context • Troubleshoots while main-taining learning focus	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE3. I can recognize emotional challenges, such as fear or anxiety, that learners may experience when using technology.	I notice basic emotional challenges when flagged and need step-by-step guidance to respond.	I recognize how technology can affect emotions/ engagement, set small evaluation goals and seek help when needed.	I assess and guide learners to manage emotional responses, consulting colleagues for deeper insights when necessary.	I proactively design for emotional safety in technology-enhanced learning, regularly refining my methods and guiding others.
Readiness indicators	• Acknowledges that learners may have different comfort levels with technology • Recognizes emotional barriers and varied online risks • Identifies signs of technology-related anxiety or exclusion	• Seeks strategies to support fearful learners • Reflects on how my own technology comfort shapes empathy • Explores socio-cultural influences on comfort/ participation	• Creates supportive environments that normalise challenges • Attentive to emotional aspects of technology integration • Demonstrates sensitivity to past negative experiences • Adapts approaches to observed emotional responses	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE4. I can create strategies for safe, inclusive online learning and promote digital citizenship.	I follow simple rules for safe, inclusive online learning and can define digital citizenship in my context.	I value digital citizenship and start devising simple strategies for inclusive learning, asking advice to check my approach.	I embed digital citizenship principles and develop safe, inclusive online experiences, collaborating at times with peers to refine approaches.	I lead comprehensive strategies to foster digital citizenship, designing comprehensive strategies for safe, inclusive online learning, and mentor others; I keep improving my own digital citizen skills.
Readiness indicators	• Describes digital citizenship in local context • Recognizes common online safety challenges • Understands digital citizenship guidelines must be culturally responsive	• Understands identity factors that shape online experiences • Begins designing responses to safety issues • Seeks information on emerging risks	• Navigates complex conversations on safety/inclusion • Sustains focus on fostering safety and belonging in digital spaces • Collaborates to refine responses to challenging situations	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE5. I can use email and navigate the web safely.	I can create accounts, strong passwords, send emails and do basic web searches with step-by-step instructions.	I use email and browse for basic tasks, asking for help when needed.	I manage email settings and browse confidently, seeking advice only on advanced features.	I stay current on safe practices and advanced tools, share knowledge, and integrate them into teaching.
Readiness indicators	• Identifies basic components of email addresses and web URLs • Has created an email account with guidance • Understands basics of browsing/email	• Accesses, sends and manages email • Browses the web when directed • Shows interest in safety best practices	• Manages email independently • Conducts independent web research • Implements basic security practices for email and web use	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE6. I can understand copyright laws, locate useful open educational resources (OERs) and explain what massive open online courses (MOOCs) are.	I follow clear steps to find OERs, respect copyright laws and explain MOOCs.	I explore copyright, OERs and MOOCs independently, seeking advice on complex legal or licensing issues.	I independently select suitable OERs, verify copyright compliance, adapt materials for context and explain MOOCs, consulting peers for specialized queries.	I confidently navigate copyright laws, locate high-quality OERs, guide others and keep licensing knowledge up to date.
Readiness indicators	• Defines OERs/ MOOCs and distinguishes them from other resources • Recognizes copyright constraints • Understands the concept of remixing/ adapting educational resources and when licences allow for it • Knows that MOOCs serve both learners and professional development	• Researches local copyright rules • Explores OER repositories • Seeks feedback on remix/ use of OER materials in teaching • Explores MOOC platforms/ courses for learners and own professional development	• Finds/evaluates OERs for relevance and quality • Remixes OER materials while respecting licensing requirements/ attributions • Evaluates MOOCs for quality, relevance and appropriate-ness	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE7. I can apply collaborative learning tools and create learning resources to encourage meaningful participation and engagement.	I can set up collaborative learning tools (e.g. discussion forums) and create simple resources (e.g. videos) with help; I need guidance to facilitate effectively.	I set up collaborative learning tools and create resources independently, sometimes asking for advice on encouraging learner engagement and participation.	I select and use collaboration tools and varied resources effectively, seeking peer input only for new or complex approaches.	I design and implement advanced collaborative learning experiences across platforms, mentor colleagues and seek help independently when stuck.
Readiness indicators	• Identifies collaboration tools and basic functions • Can set up suggested tools and create simple learning resources • Recognizes factors that influence participation and engagement • Knows facilitation matters, but needs guidance on implementation strategies	• Creates activities/resources that encourage meaningful participation • Seeks information on best practice for facilitating collaborative learning • Questions how different collaborative approaches could enhance teaching • Shows interest in supporting diverse learners in collaborative environments • Experiments with different collaborative learning engagement strategies	• Designs/facilitates collaborative learning experiences • Selects/integrates tools to meet learning objectives • Demonstrates ability to encourage participation from diverse learners and maintain engagement • Produces varied learning resources to support collaboration • Seeks peer feedback only when trying new/complex approaches	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE8. I can implement interactive tools and run effective online sessions.	I use simple interactive tools by following instructions and rely on a mentor to set up live sessions.	I try new tools and seek help when I encounter challenges, building facilitation skills.	I run online sessions independently, refining my approach based on participant feedback and consult peers occasionally.	I confidently produce high-quality interactive content, manage dynamic online sessions, stay current on tools and share expertise.
Readiness indicators	• Identifies features of meeting platforms/interactive tools • Understands how interactivity supports real-time learning • Recognizes basic technical requirements for running online sessions • Knows online facilitation differs from face-to-face teaching, but relies on step-by-step guidance for implementation.	• Begins facilitating online sessions • Seeks best practices for engagement • Learns to manage technical challenges during live sessions • Experiments with interactive features, seeking help when needed	• Runs online sessions independently using appropriate interactive tools • Engages participants effectively in real-time digital environments • Manages technical issues while teaching • Refines facilitation approach based on participant feedback and occasional input from peers	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE9. I can frame open-ended questions and effective prompts for both traditional learning and AI tools.	I create basic questions with a mentor/resource and need guidance to prompt AI effectively.	I recognize the importance of good questioning techniques, experimenting with prompts for AI tools or discussion forums, and occasionally asking for help to refine my questions.	I design open-ended questions and AI prompts that stimulate learner thinking; I can use AI to critique its own outputs, checking with peers/courses to extend my skills.	I consistently craft high-quality questions and prompts for diverse contexts and mentor others in effective techniques.
Readiness indicators	• Identifies components of effective prompts • Distinguishes closed vs open questions • Understands prompts drive participation/critical thinking • Knows AI prompts must be clear/specific to generate useful outputs • Understands that different prompting strategies lead to different output quality • Can identify the basic components of effective prompts for generative AI tools	• Creates prompts that encourage meaningful responses • Questions how different prompt structures affect learner participation and response quality • Experiments with different prompting techniques to improve AI outputs • Targets prompts to specific educational goals	• Sustains thoughtful discussions with well-designed prompts • Crafts questions that encourage learners to build on ideas • Adapts prompt style and structure to learner responses/engagement • Produces high-quality, context-appropriate AI outputs • Iterates and refines AI prompts based on output evaluation	

Digital empowerment (DE): Advanced

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE10. I can describe and select adaptive and assistive digital tools for learners based on cost and availability.	I can identify basic adaptive and assistive tools from a list and follow instructions to compare features.	I explore different digital tools and start comparing features, costs and availability with guidance, linking choices to inclusion.	I independently evaluate and select adaptive and assistive digital tools that fit learner needs, considering cost, availability and inclusion.	I can confidently choose and justify adaptive and assistive tools for my learners and share my evaluation processes with peers, seeking resources to deepen and share knowledge.
Readiness indicators	• Identifies common assistive technologies (screen readers, text-to-speech [TTS], alternative input devices) • Recognizes that assistive technologies address different support needs • Knows built-in features are often available at no additional cost • Knows that mobile devices include useful accessibility features	• Explores specific assistive technologies and their practical applications • Questions which tools best fit particular learners • Builds understanding of how tools address varied needs	• Selects appropriate tools based on needs/resources • Understands hardware/software options and their costs • Makes informed choices within institutional constraints	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE11. I can create differentiated instructional plans for diverse needs of my learners using digital techno-logies.	I create simple lesson plans with digital tools by following detailed instructions and templates.	I set goals to differentiate and experiment with digital tools to meet varied learner needs, with some guidance.	I design and adapt lesson plans independently, seeking occasional peer feedback.	I develop comprehensive, differentiated instructional plans that leverage digital tools to address the unique needs of every learner, mentor others and reflect/adjust in real time.
Readiness indicators	• Identifies ways to adapt lessons using freely available assistive technologies • Connects UDL principles to tool use • Knows plans should include multiple means of engagement, representation and expression	• Begins adapting lessons with assistive technologies • Seeks infor-mation on tools for different needs in context • Explores asset-based inclusive design	• Creates differentiated plans using assistive technologies • Leverages learner strengths through technology • Adapts content/assessment to provide multiple pathways for learning and demonstration	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE12. I can assess the ethics and impact of immersive and wearable technologies.	I follow step-by-step guidance to identify basic ethical issues and impacts of immersive and wearable technologies.	I recognize some ethical concerns and begin setting personal goals to understand them better.	I independently assess the ethical implications and practical impact of immersive and wearable technologies in my teaching.	I critically and continuously evaluate the ethics and impact of immersive and wearable technologies, using insights to inform practice.
Readiness indicators	• Identifies benefits and challenges of immersive technologies in education • Recognises that virtual reality (VR)/augmented reality (AR) technologies can provide safe practice environments and authentic experiences • Understands cost, accessibility and privacy constraints	• Starts weighing benefits vs limitations of specific immersive technologies • Seeks information on relevant VR/AR software or platforms for learners in their specific adult education contexts • Questions how to maximise positive impacts while addressing barriers (e.g. cost, access)	• Balances educational benefits with practical/ethical considerations across platforms and learner groups	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE13. I can explain and choose the relevant learning experience platforms (LXPs) and/or learning management systems (LMSs) for teaching.	I follow step-by-step instructions to understand features of LXPs and LMSs and pick a platform for a given need and budget.	I can compare a few platforms with guidance, noting which features fir my context and learner.	I independently evaluate and choose platforms based on usability and learner engagement.	I select and justify the best platform for my context, stay up to date on emerging platforms, advise peers and seek opportunities to upskill.
Readiness indicators	• Distinguishes core LMS functionality vs broader LXP capabilitiy • Recognizes platforms serve different needs/learning approaches • Knows alignment with learner needs and institutional provision matters	• Identifies capabilities that matter in local context • Explores how platforms can enhance rather than complicate learning • Experiments with different platform capabilities	• Links platform features to adult learning principles • Chooses/ implements suitable platform functionality and explains why • Stays current on emerging platform capabilities	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE14. I can interpret and visualize learner data, when relevant.	I can use a basic dashboard and follow instructions to display learner engagement data.	I explore simple data analysis tools and start to understand trends with some help.	I analyse learner engagement data independently, draw basic inferences from the results and connect to issues of ethics and data privacy.	I interpret complex data with advanced visualization tools to improve practice, share insights and stay current on ethics and data protection.
Readiness indicators	• Identifies types of engagement data available from educational systems and interactive tools • Recognizes that participation and response patterns indicate engagement • Understands data should inform teaching • Uses basic spreadsheets for averages/ simple charts • Follows instructions to display data using basic dashboards	• Explores how to interpret data from various educational tools and analytics in their teaching context • Considers what patterns and response trends indicate about learning • Questions how to use data analysis to identify learners needing additional support • Explores simple data analysis tools with some help	• Interprets data from tools to gain insight into learner engagement • Identifies meaningful participation patterns/ inferences • Uses insights from data to make targeted adjustments to content and teaching approaches • Creates useful data visualizations that reveal actionable insights • Applies strategies mindful of ethics/privacy	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE15. I can evaluate issues and biases in AI systems as it relates to use in education.	I follow step-by-step guidance to identify basic issues/biases in AI systems with clear examples provided by a mentor.	I recognise potential biases in AI and explore implications, seeking occasional advice.	I independently evaluate issues and biases in AI systems and discuss effects on educational outcomes.	I critically analyse AI systems for bias, using diverse sources/data to refine strategies and promote fairness in learning environments.
Readiness indicators	• Knows AI tools have limitations and make mistakes • Spots obvious errors/inaccuracies in AI-generated content • Recognizes that AI outputs may contain cultural biases/inappropriate representations • Understands need for human evaluation/modification • Can identify human/institutional influences behind systems	• Evaluates outputs for accuracy, relevance and cultural appropriateness • Understands common types of AI bias and how to detect them • Questions whether AI-generated content represents diverse perspectives • Considers ethical implications of using potentially biased AI content in education • Analyses examples of bias and seeks occasional advice on appropriate AI use	• Evaluates AI outputs across multiple dimensions, including accuracy, bias and representation • Modifies/rejects AI-generated outputs that are misaligned with educational goals or context • Articulates a personal ethical stance on AI use • Examines creation processes, environmental costs and broader systemic impacts	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE16. I can design AI-enabled learning experiences that empower learners.	I create basic lesson plans that include AI tools using clear examples and step-by-step instructions.	I experiment with AI tools for simple activities, seeking guidance as I learn.	I design learning experiences that integrate AI tools to promote engagement and empowerment, using feedback to improve.	I lead innovative AI-enabled learning experiences that transform teaching and empower learners, refine continuously and mentor others.
Readiness indicators	• Identifies how AI (e.g. intelligent tutoring systems, generative AI) affects learner autonomy • Recognizes assessment rigour must account for AI availability • Understands that lesson planning with AI requires a balance between efficiency and educational quality • Aligns AI integration with adult education principles	• Uses AI to generate content while critically evaluating alignment with learning outcomes • Seeks ways to redesign assessments that account for generative AI use • Preserves authentic learning experiences when AI tools are available to learners • Experiments with AI for content creation, scaffolding and formative assessment design	• Creates AI-informed content that maintains educational effectiveness and learner engagement • Demonstrates ability to redesign summative assessment to encourage appropriate AI use	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
DE17. I can reflect on how AI affects self-directed learning and decide when to use it for teaching.	I use guided reflection exercises to identify basic ways AI influences self-directed learning and my teaching methods.	I can begin to recognize both positive and negative effects of AI on self-directed learning and set personal learning goals around these insights.	I reflect independently on AI's influence on my teaching and self-directed learning and adjust methods based on feedback.	I continuously analyse and adapt to the influence of AI on my teaching and learning practices, designing innovative approaches without external guidance.
Readiness indicators	• Identifies how AI can enhance/diminish learner agency and critical thinking • Recognizes broader implications of AI integration beyond immediate gains • Understands effects of AI on judgment and problem-solving • Knows responsible AI use requires long-term thinking	• Evaluates the impact of AI-enabled learning on learner autonomy and self-direction in local context • Questions when AI support becomes dependence • Explores effects of AI on self-directed learning tied to learners' goals	• Designs AI-enhanced experiences that strengthen autonomy • Commits to ongoing evaluation and adjustment of AI use based on adult education outcomes	

Media and information literacy (MIL)

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
MIL1. I can reflect on my media sources, preferences and learning needs.	I reflect on what MIL is within adult education using clear prompts and step-by-step instructions to notice my media habits and basic learning needs.	I recognise my media preferences and identify areas where I need to improve, often asking for suggestions.	I independently reflect on and assess my media sources and preferences, adjusting my strategies based on discoveries, and seek help when needed.	I continuously reflect on and refine my media habits and learning needs, actively seeking new insights, sharing ideas with peers, and connecting habits to my beliefs as an educator.
Readiness indicators	• Identifies basic MIL concepts/ frameworks for evaluating information • Recognizes MIL links to adult learning principles (e.g. experience-based, self-directed) • Understands that information literacy supports education and civic participation • Responds to prompts/ instructions to reflect on media habits and learning needs	• Applies MIL frameworks to evaluate educational content and civic information • Shows interest in using MIL to enhance teaching effectiveness and to foster civic engagement • Recognizes media preferences and areas for improvement • Asks for suggestions about MIL development	• Integrates MIL into instructional practice and models critical evaluation • Uses MIL frameworks to support lifelong learning and active citizenship • Adjusts strategies independently based on self-assessment • Seeks help only for complex challenges	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
MIL2. I can identify risks and opportunities in digital platforms and develop strategies to use them responsibly.	I identify simple risks/opportunities in digital platforms when given examples and guidelines.	I recognize risks and benefits in digital media, set small goals to explore responsible media use, and need support to address risks in media use and content sharing.	I analyse platforms independently, identifying risks and opportunities and creating strategies for responsible media use with occasional input from peers or mentors.	I design and update comprehensive strategies for responsible media use, share practices with others, and proactively address risks and opportunities of media use and content creation.
Readiness indicators	• Identifies basic risks/opportunities of digital platform use • Recognizes how digital platforms generate revenue through user data and advertising • Understands privacy settings and security measures • Knows algorithms influence visibility • Follows guidelines to recognize risks/opportunities	• Analyses own digital platform use patterns • Implements privacy strategies • Questions balance of benefits vs risks to privacy/information quality • Sets goals for responsible media use • Needs support with complex risks/content sharing	• Balances benefits of digital platform use with risk mitigation • Helps others navigate platforms safely and effectively • Creates strategies for responsible media use with occasional input from peers or mentors • Analyses risks/opportunities independently	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
MIL3. I can apply MIL principles to support digital learning and civic engagement.	I apply basic MIL principles in structured activities when given clear examples of their role in digital learning and civic engagement.	I apply MIL principles to enhance teaching or to promote civic engagement, seeking occasional guidance.	I use MIL principles independently in lessons to support informed digital learning and active civic engagement.	I innovate and refine my use of MIL principles to empower learners and promote responsible digital citizenship.
Readiness indicators	• Identifies links between MIL and civic responsibilities • Recognizes types/sources of civic information (e.g. government, media, advocacy) • Knows evaluation is essential for informed civic participation • Applies basic MIL principles in structured activities when given clear examples.	• Evaluates civic information and engages in community discussions • Questions how to distinguish reliable vs unreliable sources of political and civic information • Supports learners to develop civic information literacy • Applies MIL to enhance teaching/civic engagement • Seeks occasional guidance	• Facilitates discussions about civic issues while helping learners evaluate information critically • Promotes informed citizenship through MIL education • Uses MIL independently to support digital learning and civic engagement	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
MIL4. I can explain digital privacy and adopt cyber-security when using online platforms.	I describe basic digital privacy concepts and follow instructions for good cybersecurity practice.	I recognise digital privacy and security issues and explore ways to protect data and media use in my teaching.	I explain privacy/security concepts independently and develop practical strategies to address challenges.	I apply advanced digital privacy and security strategies continuously and guide others on best practices.
Readiness indicators	• Identifies basic digital security risks (e.g. phishing, identity theft, data breaches) • Distinguishes privacy vs security • Knows fundamental cybersecurity practices (e.g. strong passwords, two-factor authentication) • Follows instructions for good cybersecurity practice	• Implements cybersecurity measures and privacy protection strategies • Seeks information on data protection laws and regulations relevant to their context • Questions balance of convenience vs security when using digital tools and platforms • Explores ways to protect data and media use in teaching	• Adopts strong cybersecurity practices and helps others • Makes informed decisions about digital tool selection based on privacy/security • Models responsible digital citizenship • Develops strategies to address privacy and security challenges	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
MIL5. I can evaluate and respond to fake news, misinformation and hate speech with effective strategies	I identify examples of fake news, hate speech and misinformation using clear examples and response protocols.	I identify fake news, hate speech and misinformation in media, begin experimenting with counter-strategies, and ask for help when needed.	I evaluate media content independently, developing effective strategies to counter fake news, hate speech or misinformation in teaching.	I lead efforts to combat fake news, hate speech and misinformation, creating innovative, evidence-based strategies and mentoring peers on effective responses.
Readiness indicators	• Identifies forms of hate speech and their impacts • Understands the need to respond to hate speech without amplifying harmful content • Knows socio-emotional literacy supports effective responses • Knows AI affects information quality • Distinguishes journalism, misinformation and disinfor-mation	• Implements mindful communication strategies • Reports harm-ful content appropriately • Questions how to balance free expression with protection of vulnerable groups • Evaluates AI-generated content and information sources critically using appropriate verification strategies • Experiments with counter-strategies, asking for help when needed	• Develops approaches to combat hate speech and promote inclusive online environments • Facilitates respectful discussions on discrimination/bias • Detects/responds to AI-generated misinformation • Helps others build critical evaluation skills	

Transformative practice (TP)

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
TP1. I can reflect on my strengths, challenges, and goals to improve my teaching.	I reflect on my teaching when following prompts and instructions to identify strengths, challenges and goals.	I begin to set small reflective goals and notice my teaching strengths, sometimes asking for help to identify areas for improvement.	I review my teaching independently, identifying areas for improvement and adjusting strategies, seeking occasional peer feedback.	I continuously evaluate and refine my teaching through deep reflection, setting and revising goals on my own and sharing insights with others.
Readiness indicators	• Identifies where technology affects instructional practice • Recognizes difference between general professional development and transformative practice • Understands reflection applies to planning, assessment, communication and facilitation • Understands reflection frameworks with prompts	• Begins using frameworks to reflect on practice • Questions which changes to maintain/develop further • Shows interest in making reflection routine • Asks for help to notice areas for improvement	• Self-assesses teaching strengths/challenges • Sets meaningful professional goals based on reflection • Uses reflection frameworks to critically examine teaching/technology challenges • Reviews practice independently, adjusting strategies when needed and seeking occasional peer support	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
TP2. I can develop a personal plan for continuous self-improvement that uses technology both as means and as content for professional development.	I create a basic self-improvement plan using templates and examples.	I begin setting goals and exploring digital tools for growth, seeking guidance when needed.	I design and refine my professional development plan independently using digital resources, seeking feedback to improve it.	I proactively update and manage my learning plan, using technology to drive my professional growth and mentoring colleagues.
Readiness indicators	• Distinguishes between technology, pedagogy and content knowledge • Matches professional development strategies to goals and constraints • Identifies digital tools for reflection • Recognizes AI and other technologies as part of professional development	• Creates a plan targeting a specific practice area • Seeks information on effective learning strategies • Experiments with digital professional development approaches • Incorporates emerging technology, asking for guidance when needed	• Creates/refines professional development plans integrating technology • Selects strategies based on goals, time and resources • Uses technology strategically to enhance reflective processes • Incorporates emerging technologies in professional development plans • Designs and refines plans independently using digital resources, seeking feedback	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
TP3. I can effectively identify online and hybrid professional development and networking opportunities aligned to my career goals.	I identify basic online professional development opportunities by following clear steps, connecting them to my reflections and goals.	I explore online/hybrid opportunities, asking for help to determine which ones match my goals.	I independently find and select professional development and networking opportunities aligned with my career goals.	I actively curate a range of high-quality opportunities that support my long-term career goals and share them with my professional community.
Readiness indicators	• Applies criteria to assess resource suitability for professional development • Recognizes resources serve different professional development purposes • Searches for and joins groups • Follows steps to identify opportunities • Links them to reflection and goals	• Compares multiple resources against professional development goals • Evaluates usefulness of professional learning groups • Identifies inappropriate content and assesses group moderation effectiveness • Locates specific resources within plat-forms • Explores oppor-tunities, asking for help with alignment	• Discovers and shares professional development resources and opportunities with peers • Engages with groups that align with professional development goals • Evaluates content quality, interaction levels and community effectiveness • Committed to discovering/ sharing professional development opportunities	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
TP4. I can build and maintain a digital community of practice (COP) for collaborative growth.	I participate in an online community when provided with clear structure and support.	I begin contributing ideas and asking for guidance on participation.	I independently build and maintain a digital community that encourages collaboration and resource sharing.	I lead digital communities, innovating ways to collaborate, mentoring others, and building valuable networks and partnerships to support my adult education and lifelong learning goals.
Readiness indicators	• Defines COPs, their key features and benefits • Recognises different types of COPs (formal/informal, online/in-person) • Knows how members share knowledge and support members' professional growth • Understands steps for creating a COP • Participates in a COP with guidance	• Compares types of COPs to evaluate their suitability • Questions which tools and organizational features best support specific community goals • Contributes ideas to strengthen COPs Engages in community particpation	• Builds or contributes substantively to COPs • Selects digital tools and organizational structures based on needs • Establishes rules and facilitates discussions • Maintains community engagement through safe/inclusive management	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
TP5. I can assess the impact of emerging technologies, such as generative AI, on my professional development.	I identify opportunities for professional growth through emerging technologies with step-by-step guidance.	I experiment with emerging technologies, such as generative AI, asking for help when needed.	I evaluate and integrate emerging technologies independently, refining my approach with feedback, and make connections to the risks and opportunities these technologies afford.	I continuously monitor and adopt emerging technologies for professional development, mentoring peers in their use.
Readiness indicators	• Identifies benefits/limitations of emerging technologies for professional learning tasks • Recognizes environmental, equity and dependence risks • Evaluates content quality/accuracy • Identifies new opportunities with guidance	• Seeks information on broader implications (e.g. sustainability/equity) • Questions when technology use undermines competency • Develops guidelines for responsible emerging technology use • Experiments with emerging technology to improve professional development, asking for help when needed	• Evaluates the impact of technologies on learning and teaching • Assesses short- and long-term implications of technology integration on professional learning and practice • Evaluates and integrates emerging technologies into professional development • Refines approach with feedback	

Competence	Stage 1: Guided	Stage 2: Interested	Stage 3 Involved	Stage 4 Self-directed
TP6. I can use and guide technology to support the growth and development of my peers, learners or community.	I identify, with guidance, how access to or design of technology could support the growth and development of my peers, learners and community.	I identify specific ways technology can support peers, learners or community in the long term.	I share suggestions and good practices for improving technology-enabled learning environments with my community.	I lead initiatives to improve technology-enabled learning environments, supporting the growth and development of my peers, learners and community.
Readiness indicators	• Identifies how better access/design benefits learners in their community • Recognizes risks to safety/inclusion • Connects tools addressing barriers • Understands role of digital empowerment • Identifies benefits with guidance	• Analyses technology gaps/opportunities in context • Questions inclusivity/accessibility of environments • Supports digital transformation initiatives • Evaluates digital innovations' potential for improving learning outcomes and community development • Identifies specific ways technology supports growth	• Contributes to digital transformation initiatives • Supports learners and community members in adopting and benefiting from new technologies • Shows sustained commitment to improving technology access and digital empowerment • Shares suggestions to improve technology-enabled learning environments and practices	

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