Co-funded by
the European Union

ERASMUS+ CBHE Project # 101177299-eCAMPUS-EDU-2024-CBHE

"Fostering Socially Distanced and Inclusive on Campus Education in Armenian HEIs"

POLICY PAPER

On Educators' Digital Competence Framework for Armenian Higher Education - DigiComArm

(Conceptual Foundations and Structural Design)

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YEREVAN 2025

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1. Introduction

This Policy Paper outlines the conceptual foundation and structural design for the Educators' Digital Competence Framework for the Armenian Higher Education (DigiComArm).

DigiComArm is designed to respond to both European and global strategic priorities while being firmly rooted in Armenia's national context. It builds on established digital competence frameworks including the the European Digital Competence Framework for Educators (DigCompEdu, 2017)[1], the European Digital Competence Framework for Citizens (DigComp-2.2, 2022)[2], UK's Digital Teaching Professional Framework (DTFP, 2022)[3], and the Spanish Digital Competence Framework for University Teachers (MCDDU, 2023)[4]. It also anticipates and aligns with the emerging principles of DigComp-3.0[5], including digital agency, ethical AI use, and critical engagement. The development of DigiComArm has been informed by the DCF Best Practice Reports (1 general and 4 country-specific)[6] prepared within Work Package 1 (WP.1) of the eCAMPUS project during April-May 2025.

DigiComArm is specifically adapted to address local Armenian needs identified through the Digital Competence Needs Analysis Reports (1 general and 8 institutional)[7] of eight major Armenian universities conducted within WP1 of the eCAMPUS project from April to June 2025. This framework acknowledges Armenia's diverse institutional realities, socio-cultural and educational contexts, linguistic needs, and technological readiness across higher education institutions (HEIs). By addressing these dimensions, DigiComArm supports a coherent and inclusive digital transformation of Teaching, Learning and Assessment (TLA) in higher education.

The Needs Analysis clearly showed that students and teachers use digital tools for basic educational activities (such as communication and sharing materials), but not for more advanced TLA activities (assessment, feedback, engagement). The main critical issues highlighted in the Needs Analysis are:

- Low technical proficiency,
- Limitations in the educational use of digital tools,
- The need for greater collaboration between colleagues,
- The need for greater ethical and regulatory awareness.

[1] https://publications.jrc.ec.europa.eu/repository/handle/JRC107466

[2] https://publications.jrc.ec.europa.eu/repository/handle/JRC128415

[3] https://www.et-foundation.co.uk/professional-development/edtech-support/digital-skills-competency-framework/

[4] https://epale.ec.europa.eu/en/blog/digcompedu-training-and-certification-project-spanish-universities

[5] https://www.digcomphub.eu/on-the-road-to-digcomp-3-0/

[6] https://drive.google.com/drive/folders/1xE5jNodrCQgwEKNITystf3LNPZ8hfo6g?usp=sharing

[7] https://drive.google.com/drive/folders/1AWmuJTusrPbi8OwJrRS_JEa6Sj7to-zs?usp=sharing

Importantly, DigiComArm responds to recent technological evolutions and pedagogical innovations that have emerged since the publication of DigCompEdu in 2017. These include:

- Generative Artificial Intelligence (AI) for content creation, instruction and feedback.
- Prompt-based learning approaches that stimulate active, reflective and critical engagement.
- Open Educational Resources (OER) to support equity and access.
- Digital and hybrid learning environments that demand inclusive, adaptive and human-centered design.

In addition to conceptual alignment with international frameworks, DigiComArm is designed to be operationally feasible and locally applicable, taking into account the constraints of the eCAMPUS project in terms of human, financial, and institutional resources.

The key components of the DigiComArm framework proposed in this Policy Paper include:

- *Five (5) core areas* of digital competence that address essential aspects of digital teaching, learning and assessment (TLA).
- *Fourteen (14) specific competences,* logically grouped under these areas, and streamlined for clarity and feasibility within the national educational context.
- *Three (3) proficiency levels* to enable valid, reliable and equitable assessment of educators' digital competence in Armenian higher education (HE) contexts.
- *Forty-two (42) competence descriptors* that articulate the knowledge, skills, and behaviours expected at each level.
- *Achievement indicators* designed to provide clear, measurable benchmarks of competence development across levels.

The primary goal of DigiComArm is to enhance the digital TLA competencies of educators/ academic staff in Armenian HEIs, thereby improving instructional quality through the adoption of inclusive, innovative and ethically grounded digital practices.

A national training, certification and quality assurance scheme will accompany the implementation of this framework, supporting educators' continuous professional development and fostering institutional capacity for meaningful digital transformation.

The overall structure of the DigiComArm is shown in the diagram below:

Line N	Competence Areas	Competencies	Proficiency Levels	Achievement Indicators
1	**Area-1**	Competence-1.1	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
2		Competence-1.2	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
3	**Area-2**	Competence-2.1	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
4		Competence-2.2	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
5		Competence-2.3	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
6		Competence-2.4	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
7	**Area-3**	Competence-3.1	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
8		Competence-3.2	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
9		Competence-3.3	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
10		Competence-3.4	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
11	**Area-4**	Competence-4.1	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
12		Competence-4.2	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
13	**Area-5**	Competence-5.1	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3
14		Competence-5.2	Competence descriptors for Levels 1, 2, 3	Indicators for levels-1,2,3

2. Background and Local Context

The development of the DigiComArm framework is grounded in a robust needs analysis conducted during April-June 2025 as part of WP.1 of the eCAMPUS project. This analysis, which included one general and eight institutional reports across major Armenian universities, identified critical challenges and opportunities in advancing the digital transformation of HE in Armenia (see the "Digital Competence Needs Analysis Reports"[7]).

Digital preparedness and institutional disparities:

The findings of the careful contextual analysis, conducted within eCAMPUS project, revealed that both teaching staff and students across Armenian HEIs demonstrate moderate use of digital tools for instruction and assessment. However, there are notable gaps in digital competence, particularly in areas such as technology-enhanced teaching, learning and assessment (TLA), hybrid and blended learning methodologies, inclusive design, digital accessibility, and the effective use of self-paced and adaptive learning environments.

The digital divide remains a significant issue. Armenian higher education institutions (HEI) exhibit substantial variation in infrastructure readiness, particularly between urban and regional campuses. Limited bandwidth,

outdated devices, and unequal access to digital content contribute to systemic inequities that must be addressed to ensure inclusive and equitable digital transformation. DigiComArm aims to actively support digital equity by offering scalable, resource-conscious strategies tailored to institutional realities.

Cultural and linguistic dimension:

Armenia's socio-cultural and educational context plays a crucial role in shaping educational practices. Armenian remains the primary language of instruction, and terminology used in digital competence frameworks must therefore be carefully localized to ensure clarity, relevance, and cultural resonance. Beyond translation, this involves a commitment to culturally responsive pedagogy and respect for the country's educational heritage, which often emphasizes individual academic achievement over collaborative inquiry.

The framework acknowledges this dual reality: while respecting established traditions, it promotes a gradual shift toward more interactive, collaborative, and learner-centered pedagogies supported by digital tools. Such an approach aligns with international calls for empowering students and teachers as agents of change, as articulated in the OECD Teaching Compass[8].

Integration of emerging technologies:

Since the development of DigCompEdu in 2017, digital education has been reshaped by emerging technologies - most notably generative artificial intelligence (AI), Open Educational Resources (OER), and intelligent tutoring systems. Armenian universities are increasingly exposed to these innovations, but often lack the structured support to evaluate and integrate them meaningfully.

DigiComArm integrates these developments not as isolated tools, but as catalysts for pedagogical transformation. It encourages the adoption of prompt-based learning strategies, ethical reflection on AI systems, and open digital collaboration - building both technical fluency and critical digital literacy among educators and students.

These technologies are not mere tools but are reshaping epistemologies and teacher-student relationships.

Systemic constraints and enabling factors:

The eCAMPUS project operates within a context of limited human and financial resources. Time constraints, infrastructure disparities, and uneven digital capacity present tangible challenges to implementation. However, the project also benefits from key enablers: the alignment with national modernization priorities, the strong commitment of participating institutions, and international collaboration with European universities and policy bodies. Additional enablers include existing digital literacy initiatives and opportunities for cross-border collaboration through Erasmus+ partnerships.

[8] https://www.oecd.org/en/publications/oecd-teaching-compass_8297a24a-en.html

In this spirit, DigiComArm is designed to be both aspirational and realistic - providing a clear, adaptable roadmap for enhancing digital competence across Armenian HE. It supports a vision of empowered, innovative educators capable of designing inclusive and engaging digital learning experiences for all students.

In line with emerging principles outlined in DigComp 3.0[5], the framework integrates concepts of educator agency, ethical technology use, and critical digital reflexivity across all competence areas[9].

Framework adaptation strategy:

To address these multifaceted contextual and structural challenges, DigiComArm adopts an adaptation strategy that draws on established European models - primarily DigCompEdu - while introducing tailored adjustments to fit the Armenian HE context. The framework selectively simplifies complex competence structures without compromising their conceptual integrity, ensuring usability and clarity for educators across diverse institutional settings.

Contextualisation plays a central role in this process: competences, terminology and examples are adapted to reflect the linguistic, technological and pedagogical realities of Armenian HEIs. This local grounding is complemented by sustained alignment with European standards - including DigComp-2.2, the UK's DTPF, and Spain's MCDDU - to guarantee comparability, quality assurance and potential for international recognition.

Importantly, the framework is designed to be scalable and flexible, allowing for differentiated adoption depending on each institution's level of digital maturity and available resources. This ensures that DigiComArm is not only theoretically robust, but also practically implementable across a spectrum of real-world conditions.

In sum, DigiComArm's adaptation strategy is both forward-looking and grounded: it balances national relevance with international coherence, offering a solid foundation for inclusive and sustainable digital transformation in Armenian HE system.

3. Goal and Main Objectives of the DigiComArm

Primary Goal

The primary goal of DigiComArm is to empower Armenian university educators with essential digital competences that enable them to act as reflective, ethical, and creative agents of sustainable digital transformation. This transformation supports improved teaching, learning and assessment practices,

[9] https://www.digcomphub.eu/news-events/

fosters student-centered innovation, and aligns with both national educational priorities and global technological advancements, including the responsible use of emerging AI systems.

Main Objectives

To fulfil this goal, DigiComArm pursues the following core objectives, grouped into three thematic clusters:

A. Foundational Alignment and Local Adaptation

- *Framework contextualisation*: Adapt key elements from European digital competence frameworks - including DigCompEdu, DigComp-2.2, the UK's DTPF, and Spain's MCDDU - to Armenia's specific linguistic, pedagogical, and infrastructural context, ensuring both compliance with international standards and strong national relevance.
- *Cultural responsiveness*: Integrate Armenian cultural and educational traditions into the design of the framework through inclusive terminology, locally relevant examples, and equitable access for institutions with differing resource levels.

B. Capacity Building and Innovation

- *Educator development*: Provide a structured roadmap for building educators' digital competences, with a focus on critical areas identified in the national Needs Assessment Reports[7] (e.g., digital collaboration, content creation, hybrid learning design, and ethical technology use).
- *Integration of emerging technologies*: Incorporate innovative tools and practices into the framework - including generative AI, Open Educational Resources (OER), and learning analytics - while promoting ethical, inclusive, and sustainable use.
- *Digital citizenship and agency*: Promote educators' understanding of digital citizenship and support the development of agency and reflective practices to critically engage with evolving digital ecosystems. This includes the cultivation of algorithmic awareness and critical data literacy, enabling educators to navigate AI-enhanced environments with ethical sensitivity and epistemic vigilance (as emphasized in DigComp-3.0).

C. Implementation and Sustainability

- *Assessment and certification*: Establish a robust, transparent system for evaluating and certifying educators' digital competences, linked to continuous professional development programmes.
- *Phased implementation*: Ensure a gradual rollout of the framework, allowing for staged adoption across institutions with different capacities,

and promote ownership through engagement with faculty, institutional leaders, and national stakeholders.

- *Scalable and streamlined design*: Maintain a simplified structural architecture with clear competence progression levels to facilitate practical implementation under resource constraints.
- *Monitoring and long-term sustainability*: Define mechanisms for continuous monitoring, feedback, and periodic revision of the framework to ensure it evolves in response to technological, pedagogical, and societal changes.

Together, these objectives ensure that DigiComArm serves not only as a tool for immediate capacity building, but also as a long-term catalyst for quality, equity, and innovation in Armenian HE system.

4. Structural Design of the DigiComArm

Before presenting the DigiComArm framework structure, it is important to highlight how this structure and priorities of this policy proposal have been directly informed by the findings of the Digital Competence Needs Analysis[7] conducted within the eCAMPUS project. This needs analysis, based on extensive surveys administered to over 1300 students and nearly 600 academic staff across eight Armenian higher education institutions, revealed key areas of concern and opportunity regarding digital education readiness.

The main conclusions included:

- A lack of basic and intermediate technical skills, especially in using LMS platforms beyond basic functions, digital content creation, and digital feedback tools.
- Limited pedagogical integration of digital technologies, with a strong prevalence of passive, transmissive uses over more interactive, inclusive, student-centred approaches.
- Underdeveloped collaborative practices, particularly in digital environments, both among academic peers and between faculty and students.
- Low awareness and fragmented understanding of ethical, legal, and societal implications related to digital and AI-enhanced teaching practices.

In direct response to these findings, the DigiComArm framework structure is designed around five core dimensions:

1. Collaborative - to encourage digitally mediated teamwork, co-creation, and knowledge sharing among educators and students.

2. Technical - to strengthen the foundational and operational capacity of educators in using educational technologies.
3. Pedagogical - to promote innovative and inclusive digital teaching practices tailored to diverse student needs.
4. Responsible use – to embed a culture of ethical, transparent, and critically informed use of digital tools in academic settings.
5. Engagement – to use digital technologies to enhance inclusion, personalisation and learners' active engagement.

This structure represents a context-sensitive adaptation of existing EU frameworks, notably DigCompEdu, and ensures that the framework is actionable, relevant, and grounded in the realities of Armenian higher education.

The DigiComArm framework adopts a streamlined, modular structure designed to balance international coherence with national applicability and scalability. It includes:

- 5 Competence Areas, aligned with key domains of digital education;
- 14 Key Competences, logically distributed across the areas;
- 3 Proficiency Levels — Foundational, Intermediate, and Advanced;
- 42 Competence Descriptors (one per level per competence);
- Achievement Indicators linked to each descriptor, guiding evaluation and progression.

Structure overview and indicator logic

This structure is represented in the following diagram.

DigiComArm Structure

- **5 Competence Areas**
  - **1. Professional Engagement & Development**
    - **Proficiency Levels**:
      - *Foundational*: 2 Competence descriptors-1 → 2 Achievement indicators-1
      - *Intermediate*: 2 Competence descriptors-2 → 2 Achievement indicators-2
      - *Advanced*: 2 Competence descriptors-3 → 2 Achievement indicators-3
  - **2. Digital Resources & Content Creation**
    - **Proficiency Levels**:
      - *Foundational*: 4 Competence descriptors-1 → 4 Achievement indicators-1
      - *Intermediate*: 4 Competence descriptors-2 → 4 Achievement indicators-2
      - *Advanced*: 4 Competence descriptors-3 → 4 Achievement indicators-3
  - **3. Teaching & Learning**
    - **Proficiency Levels**:
      - *Foundational*: 4 Competence descriptors-1 → 4 Achievement indicators-1

- *Intermediate*: 4 Competence descriptors-2 → 4 Achievement indicators-2
- *Advanced*: 4 Competence descriptors-3 → 4 Achievement indicators-3

- **4. Assessment & Feedback**
  - **Proficiency Levels**:
    - *Foundational*: 2 Competence descriptors-1 → 2 Achievement indicators-1
    - *Intermediate*: 2 Competence descriptors-2 → 2 Achievement indicators-2
    - *Advanced*: 2 Competence descriptors-3 → 2 Achievement indicators-3

- **5. Empowering & Engaging Learners**
  - **Proficiency Levels**:
    - *Foundational*: 2 Competence descriptors-1 → 2 Achievement indicators-1
    - *Intermediate*: 2 Competence descriptors-2 → 2 Achievement indicators-2
    - *Advanced*: 2 Competence descriptors-3 → 2 Achievement indicators-3

- **3 Proficiency Levels** (Progression: **Foundational** → **Intermediate** → **Advanced**)

Each proficiency level reflects increasing complexity and autonomy:

- *Foundational:* Focus on awareness, compliance, and basic application.
- *Intermediate:* Emphasis on adaptation, analysis, and collaborative practices.
- *Advanced:* Involves leadership in innovation, systemic design, and mentoring.

Achievement indicators are generalised to emphasise skill progression and competence development, without prescribing specific tools or methods, to support contextual flexibility across institutions. These indicators are formulated as observable behavioural outcomes, aligned with the cognitive progression defined by Bloom's Taxonomy, ensuring clarity and measurability across all levels of proficiency.

Rationale for structural simplification

To enhance feasibility and practical application, DigiComArm simplifies the original 6-level model used in DigCompEdu and similar frameworks, opting for a 3-level progression while preserving the pedagogical integrity and learning outcomes. This makes the framework more accessible for institutions with diverse capacities, particularly those in resource-constrained settings, and supports phased institutional adoption.

DigiComArm also reduces the number of areas and competences - from the 5–7 areas and 21–24 competences found in DigCompEdu, DigComp-2.2, MCDDU and DTPF - to 5 Competence Areas and 14 Key Competences, each carefully selected for relevance and priority within the Armenian HE system.

Overview of competence areas and key competences

Competence Areas with	Key Competences	Alignment Notes

Descriptions		
1. Professional Engagement & Development: Using digital technologies for communication, collaboration and professional development	1.1. Communication & collaboration 1.2. Continuous Professional Digital Development	Integrates DigCompEdu's competences 1.1, 1. 2 & 1.4
2. Digital Resources & Content Creation Sourcing, creating and sharing digital resources	2.1. Selecting digital resources 2.2. Creating & modifying digital resources 2.3. Managing digital resources 2.4. Responsible use of digital resources	Integrates DigCompEdu's competences 2.1-2.3 and 6.3(1), 6.4, and adds OERs (new)
3. Teaching & Learning Managing and instrumenting the use of digital technologies in T&L	3.1. Instructional design & teaching 3.2. Academic guidance & support 3.3. Collaborative learning 3.4. Supporting autonomous learning	Integrates DigCompEdu's competences 3.1-3.4, 6.1, and adds AI tools (new)
4. Assessment & Feedback Using digital technologies and strategies to enhance assessment	4.1. Assessment 4.2. Feedback & improvement	Integrates DigCompEdu's competences 4.1-4.3
5. Empowering & Engaging Learners Using digital technologies to enhance inclusion, personalisation and learners' active engagement	5.1. Accessibility & inclusion 5.2. Engaging learners	Integrates DigCompEdu's competences 5.1 & 5.3, and 6.5

These areas incorporate key advancements - including generative AI, OER, and accessibility principles - and draw from DigCompEdu, DigComp-2.2 and national needs assessments. A detailed mapping and set of descriptors are provided in the Annex.

This structural design ensures clarity, coherence, and scalability while supporting inclusive and innovative digital transformation across Armenian HE sector.

5. Proficiency Levels

To ensure the framework is both manageable and developmentally meaningful, DigiComArm adopts a simplified progression model comprising three proficiency levels: Foundational, Intermediate, and Advanced. This structure eliminates sublevels to reduce complexity and better suit institutional realities across Armenian HE.

Each level is aligned with the cognitive stages of Bloom's Taxonomy, offering a progression from basic awareness and application to independent innovation and leadership. Competence descriptors will be formulated to be measurable, observable, and actionable.

A detailed matrix of Bloom's Taxonomy-aligned action verbs associated with each competence and proficiency level is provided in the Annex-2.

Level	Descriptor	Cognitive Stage (Bloom's Taxonomy)
Foundational (beginner)	***Basic digital practices*:** • *Engages in basic digital practices* • *Assimilates new information and applies essential tools in routine teaching and learning contexts*	***Remembering/Understanding*:** Focus on awareness, compliance, and initial application
Intermediate	***Integrated digital tools for pedagogy*:** • *Integrates digital tools purposefully into pedagogy* • *Adapts practices and reflects on their impact* • *Collaborates with others*	***Applying/Analyzing*:** Emphasis on adaptation, analysis, and collaborative practices
Advanced	***Leadership in digital education:*** • *Demonstrates leadership in digital education* • *Critiques practices* • *Mentors peers* • *Designs innovative strategies*	***Evaluating/Creating*:** Leadership in innovation, systemic design, and mentoring

6. Key Adaptations and Alignment with National Context

The DigiComArm framework incorporates several adaptations to address the evolving educational landscape, the integration of emerging technologies, and the specific realities of Armenian HE:

- *Generative AI integration*: The framework explicitly incorporates competences related to the ethical and pedagogically meaningful use of generative AI. These include content creation, assessment design, and personalised learning support reflecting the transformative potential of AI in education.
- *Hybrid & blended learning focus*: Dedicated competences support the design and facilitation of hybrid and blended learning environments. These address the systemic shift toward more flexible, multimodal educational delivery in the post-pandemic context.

- *Resource efficiency and scalability*: The framework streamlines complexity by including 14 key competences across 5 areas, with a simplified 3-level progression model. Compared to DigCompEdu's 22 competences and 6 levels with 132 descriptors, DigiComArm uses only 42 descriptors - a 68% reduction in complexity - while preserving pedagogical depth and alignment with Bloom's Taxonomy.
- *Teacher preparedness and progression*: The three-level structure accommodates a wide range of digital readiness levels among educators. It enables gradual progression from foundational to advanced competence and supports inclusive access to digital professional development across institutions.

These adaptations ensure that DigiComArm is both contextually grounded and forward-looking, aligning with European frameworks while addressing the practical and cultural conditions of Armenian HE. These design choices make DigiComArm not only feasible but also adaptable to future policy evolution and technological advancement.

7. Implementation Roadmap

Phase 1: Framework finalization

The initial phase begins with finalizing the DigiComArm framework itself. This involves defining detailed competence descriptors for each of the 14 competencies (across the five core areas) at each proficiency level (foundational, intermediate, and advanced) with specific achievement indicators. The development process will be complemented by extensive stakeholder consultations involving educators, students, administrators, and industry experts, ensuring the framework meets local Armenian educational needs. Pilot testing with target user groups will validate the framework's effectiveness and usability, culminating in 42 fully validated competence descriptors and achievement indicators ready for broader implementation.

Phase 2: Pilot implementation

Following the finalization of the framework, the pilot phase will deploy the DigiComArm framework across four consortium universities, including YSU, YSMU, ASPU, and NU. This pilot implementation will allow for comprehensive data collection on the framework's practical application, user experience, and educational impact. Feedback from faculty, students, and administrators will inform iterative refinements to ensure optimal functionality.

In addition to qualitative feedback, the pilot will incorporate initial impact indicators, such as changes in educator self-efficacy, digital practice adoption, and student engagement metrics, to assess the framework's effectiveness and inform future scaling.

Phase 3: Capacity building

The training phase emphasizes building institutional capacity through a targeted professional development programme. Modular training sessions will be organized around DigiComArm's priority competence areas, including *Digital Resources & Content Creation*, *Teaching & Learning*, and *Assessment & Feedback*. These training modules will be designed to accommodate different learning preferences, ensuring widespread adoption and effective implementation. The possible formats might involve real-time and self-paced courses and instructive materials. It will be necessary to articulate this processes with technology enhancement at department, faculty and university levels.

Training modules will incorporate verb-based learning outcomes as defined in the Bloom's Taxonomy-based competence matrix (see Annex-2), ensuring cognitive alignment and assessment consistency.

Phase 4: Certification and recognition

The final implementation phase establishes a formal certification system that recognizes achievement across the competence framework. A tiered badge system offering Foundational, Intermediate, and Advanced levels will be officially endorsed and issued by the Ministry of Education, Science, Culture and Sport, providing national recognition for digital competence achievements. This certification structure will create clear pathways for professional development while establishing standardized benchmarks for digital literacy across Armenia's HE system. In this process it will be important to involve in the training sessions the trainers with an advanced proficiency in technology-enhanced T&L.

Where possible, the badge system will be designed for compatibility with European digital credentials infrastructure, such as Europass Digital Credentials, ensuring portability and compatibility with EU-wide recognition systems.

8. Conclusion

The DigiComArm framework represents a strategic synthesis of international standards and national priorities. While drawing on well-established models such as DigCompEdu, DigComp-2.2, the UK's DTPF and Spain's MCDDU, it is firmly rooted in Armenia's HE context - addressing linguistic diversity, uneven digital readiness, and culturally embedded pedagogical traditions.

Its streamlined structure - based on 5 competence areas, 14 key competences, and a simplified three-level progression model - ensures both conceptual clarity and implementation feasibility. The use of localized competence descriptors enhances contextual relevance and usability across diverse institutional realities, making the framework adaptable and applicable at scale.

The framework's concrete and actionable competences serve as a foundation for the development of meaningful training programmes and certification pathways, empowering educators to engage in continuous professional

development and enabling institutions to benchmark and recognize digital competence in a coherent, transparent manner.

Importantly, DigiComArm anticipates the future direction of European digital policy by aligning with the vision and values of DigComp-3.0. These include transversal principles such as digital agency, ethical and responsible technology use, algorithmic awareness, and inclusive innovation, which are interlinked across all competence areas.

By supporting a new generation of reflective, empowered, and digitally fluent educators, DigiComArm has the potential to enhance the quality, equity, inclusiveness and internationalization of Armenia's HE system - laying the ground for a student-centered, ethically guided, and innovation-driven digital future in teaching, learning, and assessment (TLA).

Annexes

The Annex-1 presents the full structure of the DigiComArm framework, detailing the fourteen (14) key competences distributed across five (5) core areas. These competences define what Armenian HE teaching staff members need in order to foster effective, inclusive, and innovation-driven teaching, learning, and assessment in the digital age.

Each competence will be accompanied by descriptors that reflect progressive levels of proficiency, from foundational to advanced, and aligned with Bloom's Taxonomy. These descriptors will be designed to be actionable, measurable, and context-sensitive, supporting both initial training and lifelong professional development.

The framework integrates priority themes from DigComp-3.0, including ethical and responsible use of generative AI, collaboration, accessibility, digital well-being, and critical engagement with emerging technologies. The organization of competences reflects a pedagogically grounded, scalable, and forward-looking approach to digital transformation in Armenian HE system.

The Annex-2 provides a Bloom's Taxonomy-based competence matrix aligned with DigiComArm framework, which provides a structured overview of the observable cognitive actions associated with each competence and proficiency level in the DigiComArm framework. The verbs are aligned with Bloom's Taxonomy and directly reflect the actions and intentions expressed in the competence descriptors.

This matrix maps each of the 14 key competences, grouped by their respective competence areas, to appropriate Bloom's Taxonomy action verbs at the Foundational, Intermediate, and Advanced levels. The verbs were carefully selected to reflect the observable behaviors and cognitive complexity intended

in the competence descriptors listed in the Annex-1. This alignment allows valid competence assessment and transparent certification processes.

Annex-1: DigiComArm - Armenian Digital Competence Framework for Educators in Higher Education

Educator's Digital, Transversal and Pedagogic/Didactic Competences (The competences educators need to foster effective, interactive, innovative and inclusive learning process by using digital tools & technologies)				
Area 1. Professional Engagement & Development: Using digital technologies for communication, collaboration and professional development	**Area 2. Digital Resources & Content Creation:** Sourcing, creating, and sharing digital resources	**Area 3. Teaching & Learning:** Managing & instrumenting the use of digital technologies in T&L	**Area 4. Assessment & Feedback:** Using digital technologies and strategies to enhance assessment	**Area 5. Empowering & Engaging Learners:** Using digital technologies to enhance inclusion, personal-isation and learners' active engagement
1.1. Communication & collaboration • Use digital technologies for communication and collaboration, exchange of knowledge & experiences, and pedagogical practice & innovation	**2.1. Selecting digital resources** • Select digital resources aligned with learning objectives, pedagogical strategies, and learner needs • Use, create and share Open Educational Resources (OER) with awareness of licensing (New!)	**3.1 Instructional design & teaching** • Use digital technologies to promote inclusive and engaging learning experiences • Integrate generative AI tools to personalise teaching approaches (New!)	**4.1 Assessment** • Use digital technologies for formative & summative assessments • Enhance diversity and adequacy of assessment formats & methods	**5.1 Accessibility & inclusion** • Ensure digital learning opportunities are accessible and inclusive for all learners (including those with special needs) • Adapt digital technologies to accommodate diverse learning needs, allowing learners to follow individual learning paths and learn at their own pace
1.2. Continuous Professional Digital Development • Reflect on, develop and evolve digital pedagogical practices • Use digital sources for ongoing professional growth	**2.2. Creating & modifying digital resources** • Modify and create new digital educationnal resources in multiple formats • Support learners in developing their own digital content in different formats[10]	**3.2 Academic guidance & support** • Use digital platforms to provide guidance & support to learners (individually & collectively), within and outside the classroom • Enable learners to use, navigate, and critically evaluate the credibility of information in digital environments[10]	**4.2 Feedback & improvement** • Interpret digital data on learner performance to inform assessments and adapt teaching strategies • Promote learner engagement through targeted feedback	**5.2 Engaging learners** • Use digital technologies to engage learners through creativity and real-world problem-solving[11]
	2.3. Managing digital resources • Organise and curate digital materials, make it available to learners ensuring copyright compliance, and privacy	**3.3 Collaborative learning** • Use digital technologies to promote learners' collaboration and knowledge sharing both within and beyond the classroom		
	2.4. Responsible use of digital resources[10] • Promote learners' awareness of digital rights and sources referencing • Guide learners in ethical, safe and well-being-oriented use of digital resources & technologies	**3.4 Supporting autonomous learning** • Foster learners metacognitive and self-regulated learning • Empower learners to monitor their learning through digital self-assessment and reflection		

[10] From DigCompEdu's Area 6

[11] From DigComp-3.0

Annex-2: Bloom's Taxonomy action verbs for describing educator's key digital competences across three proficiency levels

Competence Area	Key Competence	Proficiency Level (linked to Bloom's taxonomy)		
		Foundational (Remembering/Understanding)	**Intermediate** (Applying/Analyzing)	**Advanced** (Evaluating/Creating)
		Action Verbs		
1. Professional Engagement & Development	1.1 Communication & collaboration	Recognize, identify, follow, observe, understand	Apply, collaborate, participate, utilize, share	Lead, critique, mentor, innovate, strategize
	1.2 Continuous Professional Digital Development	Acknowledge, understand, participate, comply	Implement, adapt, reflect, contribute, practice	Design, evaluate, mentor, develop, lead
2. Digital Resources & Content Creation	2.1 Selecting Digital Resources	Recognize, identify, locate, access, familiarize	Evaluate, compare, choose, integrate	Critique, innovate, strategize, lead
	2.2 Creating & Modifying Digital Resources	Use, create, adapt, develop, implement	Design, develop, customize, enhance	Curate, synthesize, lead, pioneer
	2.3 Managing Digital Resources	Organize, categorize, store, maintain	Manage, curate, update, optimize	Lead systems, develop policies, oversee
	2.4 Responsible Use of Digital Resources	Follow, respect, comply, cite, attribute	Promote, model, advocate, monitor	Advocate, mentor, establish standards
3. Teaching & Learning	3.1 Instructional Design & Teaching	Demonstrate, explain, follow, observe	Implement, adapt, facilitate, modify	Innovate, design, lead, critique
	3.2 Academic Guidance & Support	Assist, guide, clarify, advise	Coach, mentor, guide, reflect	Mentor, develop programs, oversee
	3.3 Collaborative Learning	Recognize, participate, support	Facilitate, promote, coordinate	Lead, orchestrate, inspire
	3.4 Supporting Autonomous Learning	Encourage, motivate, support	Encourage, empower, foster	Empower, co-create, mentor
4. Assessment & Feedback	4.1 Assessment	Recognize, identify, record, observe	Design, administer, interpret, analyze	Develop, critique, innovate, oversee
	4.2 Feedback and Improvement	Acknowledge, provide, follow, understand	Provide, suggest, evaluate, refine	Evaluate, synthesize, mentor, lead
5. Empowering & Engaging Learners	5.1 Accessibility & Inclusion	Recognize, identify, follow, respect	Implement, adapt, promote, advocate	Lead, innovate, critique, develop policies
	5.2 Engaging Learners	Motivate, support, encourage, involve	Facilitate, inspire, involve, collaborate	Empower, co-create, mentor, lead

Co-funded by the European Union

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