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HELPDESK RESPONSE 194

Exploring Teacher Digital Skills and Literacy Competencies

A curated list of frameworks and resources to inform UNICEF Thailand

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Abbreviations and acronyms

AI	Artificial Intelligence
CBE	Competency-based education
CFT	Competency Framework for Teachers
DETECT	Developing Teachers' Critical Digital Literacies
GFECDA	The Global Framework for Educational Competence in the Digital Age
ICT	Information and communication technology
ISTE	International Society for Technology in Education
OBEC	Office of the Basic Education Commission
SEA-TCF	The Southeast Asia Teacher Competency Framework
SEAMEO INNOTECH	Southeast Asian Ministers of Education Organisation Regional Centre for Educational Innovation and Technology

1. Introduction

This Helpdesk Report was developed in response to a request from UNICEF Thailand for a curated list of resources and frameworks for digital skills and literacy designed for teachers. It compiles global, regional, and national frameworks to inform the development or adaptation of teacher-specific training and materials in Thailand.

This report does not aim to cover every leading framework; rather, it presents a curated selection of resources with relevant information that UNICEF Thailand can use to determine next steps for developing and/or adapting resources and training related to digital literacy and competencies. These efforts aim to ensure that resources are teacher-specific and aligned (where appropriate) with existing strategies, and can inform the development of future resources. Additionally, this report supports efforts to create and/or align student-specific digital literacy competencies with those of teachers.

This report summarises 16 frameworks outlining teacher digital skills and literacy competencies. A comparison of these frameworks reveals several key insights, including the following:

- Digital literacy is defined across multiple domains
- Teacher development is a central component
- Learner-centred approaches align with competency-based education (CBE).

However, there is limited focus on child safeguarding, and regional resources remain scarce.

Our recommendations for future work include:

- Emphasising ethical and safe technology use, including stronger integration of child safeguarding principles.
- Ensuring accessibility and equity, addressing disparities in access to technology, internet connectivity, and devices.
- Supporting lifelong learning and professional development through self-assessment tools, modular learning opportunities, and peer networks.

- Promoting collaboration and knowledge sharing, fostering spaces where teachers can exchange ideas, share best practices, and receive mentorship on digital pedagogy.

To equip UNICEF Thailand with relevant information, this curated list begins with a brief introduction to digital skills frameworks, including the methodology and selection criteria, followed by a compilation of resources categorised into global, regional, and country-specific frameworks. Designed as a reference for the team, this list does not prescribe specific actions but serves as a foundation for further decision-making.

2. Digital skills frameworks: An overview

In today's rapidly evolving digital landscape, teachers play a critical role in equipping students with the skills needed to navigate an increasingly technology-driven world. Digital skills, as defined by ↑UNESCO (2023), encompass a range of abilities that enable the use of digital devices, communication applications, and networks to access, manage, and utilise information. These skills can allow individuals to create and share digital content, communicate and collaborate, and solve problems for effective and creative self-fulfilment in life, learning, work, and social activities. Digital literacy extends beyond technical proficiency, encompassing the ability to access, manage, understand, integrate, communicate, evaluate, and create information safely and appropriately through digital technologies for employment, decent jobs, and entrepreneurship (↑Law et al., 2018). It includes competencies often referred to as computer literacy, ICT literacy, information literacy, and media literacy.

This report presents a compilation of global, regional, and national frameworks and relevant resources for digital skills and literacy explicitly designed for teachers. It aims to inform the development or adaptation of Thai resources and training related to digital literacy and competencies so that they are tailored to teachers' needs. By exploring these models, we aim to support UNICEF Thailand in developing or adapting these frameworks for the Thai context, to inform the development of upcoming resources for the One Teacher Thailand Professional Learning Community Framework.

The report is structured as a curated list of frameworks divided into three sections: global, regional, and Thailand-specific. Many of the frameworks are sourced from UNESCO's Digital Competence Frameworks for Teachers, Learners, and Citizens (↑UNESCO-UNEVOC, n.d.)—a database that serves as a global reference for understanding how digital competencies are defined for citizens, learners, and educators through various competence frameworks. Additional resources were identified through web searches, recommendations from colleagues and partners, and direct sources from UNICEF Thailand.

The final selection is based on key criteria, including the most recognised and rigorous frameworks in the EdTech sector, a strong focus on teachers' digital literacy, flexibility for contextualisation to the Thai context, and alignment with competency-based education (CBE) elements or child safeguarding considerations (where applicable). The report concludes with key takeaways and recommendations based on the frameworks, offering

practical guidance for policymakers and educators in designing teacher digital literacy initiatives. For the complete list of frameworks, see here.

3. Curated list

3.1. Global resources on teacher digital literacy competencies

Resource	Analysis
AI Competency Framework for Teachers *Source:* ↑UNESCO, 2024 *Type of resource: Framework* *Location: Global* *Target audience: Educators* *Grade focus: Not specified*	**Description:** The AI (Artificial Intelligence) Competency Framework for Teachers (AI CFT) provides a reference for national competency development and training programmes, emphasising lifelong professional development. It ensures that teachers can use AI responsibly and effectively while mitigating risks to students and society. It reinforces that AI should complement, not replace, teachers' roles. **Key features:** ■ The AI CFT aligns with and complements the 2018 UNESCO ICT Competency Framework for Teachers. ■ The framework outlines five key competency areas: 1. A human-centred mindset — focusing on agency, accountability, and social responsibility 2. Ethics of AI — promoting responsible AI use 3. AI foundations and applications — building knowledge and skills for AI use and creation 4. AI pedagogy — leveraging AI for innovative teaching 5. AI for professional development — using AI for continuous learning ■ UNESCO recommends integrating the AI competency framework within broader AI capacity-building strategies, which include: 1. Ensuring equitable internet access 2. Enforcing ethical AI design principles 3. Promoting sustainable and environmentally friendly AI practices

Resource	Analysis
AI Literacy Framework *Source: Digital Promise* (↑Mills et al., 2024) *Type of resource: Framework* *Location: United States; Global* *Target audience: Educators, students, support personnel, education experts, policymakers* *Grade focus: Primary, secondary*	**Description:** The AI Literacy Framework focuses on the rapid advancement of generative AI and its impact on K–12 education, emphasising the importance of safely and thoughtfully adopting AI technologies. It addresses concerns about their effects on historically excluded learners and builds on existing AI literacy resources. The framework aims to equip educators, leaders, and students with the skills needed to evaluate and integrate AI in educational settings safely and effectively. **Key features:** ■ Distinguishes between three types of engagement: 1. *Interact* — using AI systems that suggest or automate decisions 2. *Create* — using AI to generate content 3. *Apply* — developing AI systems for practical applications, such as building AI-powered tools ■ Encourages critical thinking about the safety, transparency, ethics, and impact of AI systems, with a focus on the implications of AI use, including data privacy, bias, and societal consequences. ■ The framework aligns with CBE by emphasising the development of foundational skills, such as critical thinking, creativity, and ethical decision-making, which learners need to evaluate and interact with AI in diverse contexts.

Resource	Analysis
Critical Digital Literacies Framework (CDL) *Source: DETECT* (↑Gouseti et al., 2021) *Type of resource: Framework* *Location: Global* *Target audience: Educators* *Grade focus: Primary, secondary*	**Description:** A part of the Developing Teachers' Critical Digital Literacies (DETECT) project, the CDL framework for educators enhances national and international digital literacy initiatives by integrating key dimensions such as digital, information, media, and data literacy into a comprehensive model. It emphasises that digital literacy is not just about technical proficiency but also includes the ability to question and challenge the social, political, and ethical implications of digital tools and platforms. **Key features:** ■ The CDL framework for schools includes the following main dimensions of digital literacies: Technology Use, Data Literacies, Information Literacies, Digital Knowledge Creation, Digital Communication and Collaboration, Digital Well-being and Safety, Digital Citizenship and Digital Teaching and Learning. ■ CDL underscores the importance of integrating digital skills with pedagogical practices, fostering critical thinking and creativity in students, and enabling them to navigate a complex, interconnected digital world. ■ The framework aligns with CBE principles by emphasising the development of critical thinking and problem-solving skills, while encouraging responsible digital citizenship.

Resource	Analysis
Educator's Digital Competency Framework *Source:* ↑UNICEF, 2022 *Type of resource: Framework* *Location: Europe and Central Asia* *Target audience: Educators, policymakers, school leaders, students* *Grade focus: Not specified*	**Description:** UNICEF's Europe and Central Asia Regional Office developed the Educators' Digital Competence Framework as part of the LearnIn project to enhance online teaching, empower teachers, and promote educational innovation. This adaptable framework supports policymakers, schools, teachers, and learners by fostering 21st-century digital skills and ensuring equitable access to quality education across the region. **Key features:** The framework outlines 20 competencies grouped into four key areas: 1. Knowledge Development — the ability to integrate digital teaching, learning, and assessment approaches aligned with national policies. 2. Knowledge Application — using ICT responsibly to enhance learners' digital skills, foster problem-solving, and create new knowledge. 3. Knowledge Sharing — engaging in communities of practice to encourage collaboration and professional dialogue. 4. Knowledge Communication — leveraging digital tools for effective communication with students and stakeholders while ensuring security and responsible use of digital resources. The focus on skill development, personalised and inclusive learning, application of knowledge, lifelong learning, and professional development aligns with CBE principles.

Resource	Analysis
European Framework for the Digital Competence of Educators (DigCompEdu) *Source:* (↑European Commission Joint Research Centre, n.d.) *Type of resource: Framework* *Location: Europe* *Target audience: Educators in formal and informal contexts, policymakers* *Grade focus: All levels; lifelong learning*	**Description:** DigCompEdu is a well-recognised framework that defines digital competence for educators. It serves as a reference to guide the development of digital skills specific to educators across Europe. The framework applies to teachers at all educational levels, from early childhood to higher and adult education, encompassing general and vocational training, special needs education, and non-formal learning environments. **Key features:** ■ The framework describes 22 competencies organised in six areas: 1. Professional engagement 2. Digital resources 3. Teaching and learning 4. Assessment 5. Empowering learners 6. Facilitating learners' digital competence ■ SELFIEforTEACHERS (↑European Commission Joint Research Centre, n.d.) is an interactive self-reflection tool to help teachers assess and improve their digital competence as part of the Digital Education Action Plan 2021–2027. – Based on the DigCompEdu framework, the tool allows teachers to identify strengths and gaps, design personalised learning paths, and contribute anonymised data to inform professional development programmes. ■ DigCompEdu aligns with CBE principles by defining progressive proficiency levels (from 'Newcomer' to 'Pioneer'), allowing educators to demonstrate mastery at their own pace and receive tailored professional development based on their specific needs.

Resource	Analysis
The Global Framework for Educational Competence in the Digital Age (GFECDA) *Source:* ↑ProFuturo, 2020 *Type of resource: Framework* *Location: Global* *Target audience: Educators* *Grade focus: All levels; lifelong learning*	**Description:** The Global Framework for Educational Competence in the Digital Age (GFECDA) integrates educational and digital competencies into a unified vision of teaching in the digital era. Developed through an analysis of 50 international frameworks, this approach provides a comprehensive, flexible, and globally applicable framework for digital competence in education. The framework supports teacher development, training, and advisory efforts, as well as the creation and evaluation of educational tools and materials. **Key features:** ■ The framework is organised into three identities: 1. Citizen Identity — Educators commit to lifelong learning, digital literacy, and active societal engagement. 2. Teacher Identity — Educators design learning experiences, facilitate student success, and assess learning for continuous improvement. 3. Connector Identity — Educators act as leaders by sharing practices, collaborating with peers, and supporting students' future development. ■ Each identity includes essential roles that contribute to an educator's professional growth and influence. ■ The framework offers a global structure adaptable to different education systems, allowing for varied implementation based on local needs. ■ GFECDA aligns with CBE principles by having clear, competency-oriented identities, flexible and context-specific learning paths, and assessment as a key component of the teaching role.

Resource	Analysis
ISTE Standards for Educators *Source: International Society for Technology in Education (ISTE)* (↑Crompton, 2023) *Type of resource: Framework* *Location: Global* *Target audience: Educators* *Grade focus: All levels*	**Description:** The ISTE Standards are guidelines to support educators in effectively integrating technology into their teaching. These standards help teachers enhance their practices, collaborate with others, and empower students to take charge of their learning. They emphasise the development of educators' digital skills and promote innovative teaching approaches that use technology meaningfully. **Key features:** ■ The ISTE Standards focus on various aspects of digital literacy, including pedagogy, technology integration, and digital citizenship. ■ The framework emphasises critical thinking, creativity, collaboration, and problem-solving, which are key components of CBE.

Resource	Analysis
Teachers' Digital Skills & Digital Competency Frameworks for Teaching and Learning *Source: World Bank* (↑EdTech team, 2023) *Type of resource: Knowledge Pack* *Location: Global* *Target audience: Educators, policymakers, curriculum developers, teacher-trainers* *Grade focus: All levels*	**Description:** This Knowledge Pack aims to help readers identify and prioritise teachers' digital pedagogical skills for remote and blended learning, as well as select a skills framework that aligns with their context. By showcasing and analysing various frameworks, the brief aims to support the sustainable improvement of teachers' instructional practices and students' learning outcomes during and beyond the Covid-19 pandemic. **Key features:** The Knowledge Pack has four key goals: 1. Exploring the digital pedagogical skills teachers need for remote and blended learning, including strategies for integrating technology into in-person teaching. 2. Providing guidance on selecting a digital skills framework suited to local contexts. 3. Offering a discovery tool to help educators compare frameworks, prioritise skill clusters, and follow recommended steps. 4. Addressing key considerations for effective implementation of a teacher's skills framework.

Resource	Analysis
UNESCO ICT Competency Framework for Teachers *Source:* UNESCO, 2018 *Type of resource: Framework* *Location: Global* *Target audience: Teacher-trainers, support personnel, education experts, policymakers* *Grade focus: All levels; lifelong learning*	**Description:** This framework (Version 3) aligns with Agenda 2030, the United Nations' global plan for sustainable development, which includes quality education and the integration of ICT in learning. Designed for teacher-training personnel, educational experts, policymakers, and other professional development providers, it guides teacher-training policies and programmes, emphasising the need for educators to develop ICT skills while leveraging technology to enhance collaboration, problem-solving, creativity, and innovation. **Key features:** ■ The framework integrates ICT into three phases of teacher development: 1. Pre-service training — foundational pedagogy and digital tool use. 2. In-service training — ongoing structured learning relevant to teaching. 3. Lifelong learning — continuous pedagogical and technical support. ■ It includes 18 teacher ICT competencies, structured across six aspects and three levels, guiding teachers from basic to advanced ICT integration. ■ It advocates for adapting professional development to local contexts to ensure effective competency-building. ■ It has been continuously updated (2008, 2011, 2018) to include Open Educational Resources, inclusive education, and evolving digital trends. ■ It aligns with CBE principles by promoting learner-centred approaches, application of practical skills, and the use of technology for personalised and diverse learning pathways, supported by formative and summative assessments.

3.2. Regional digital literacy resources (Southeast Asia)

Resource	Analysis
The Southeast Asia Teacher Competency Framework (SEA-TCF) *Source:* SEAMEO INNOTECH & Teachers' Council of Thailand, 2018 *Type of resource: Framework* *Location: Southeast Asia* *Target audience: Educators, policymakers, teacher-trainers* *Grade focus: All levels*	**Description:** The Southeast Asia Teacher Competency Framework (SEA-TCF) was developed as part of a regional effort by the Southeast Asian Ministers of Education Organization Regional Centre for Educational Innovation and Technology (SEAMEO INNOTECH) and the Ministries of Education from 11 Southeast Asian countries to enhance teacher education and professional development from 2015 to 2035. Though it is not specific to technology, the framework aims to improve teaching quality by setting a standard set of competencies for teachers across the region. **Key features:** ■ SEA-TCF consists of four essential competencies: 1. Knowing and understanding what to teach 2. Helping students learn 3. Engaging the community 4. Becoming a better teacher every day. ■ The four essential competencies consist of 12 general competencies, 31 enabling competencies, and 136 success descriptors. ■ The enabling competencies are a set of performance criteria, while success descriptors explain the observable behaviours expected of a high-performing teacher.

Resource	Analysis
Teachers' Digital Literacy in the East Asia and Pacific Region *Source:* UNICEF EAPRO, 2024 *Type of resource: Report* *Location: Cambodia, China, Lao PDR, Solomon Islands, and Vanuatu* *Target audience: Educators, policymakers, teacher-trainers* *Grade focus: All levels*	**Description:** This report examines digital education in East Asia and the Pacific, with a focus on teachers' roles in preparing students for the workforce. Drawing on research and stakeholder insights, it highlights the need for gender-responsive teaching and addresses challenges like rural disparities in digital resources. Key priorities include improving teachers' digital skills, adopting diverse pedagogies, and ensuring online safety. **Key findings:** ■ Digital proficiency varies across countries, impacting student learning. While China prioritises digital literacy with structured programmes and advanced technology use (VR, AI), Cambodia, Solomon Islands, and Vanuatu rely on self-directed learning with minimal formal training. ■ Challenges to achieving digital literacy include time constraints (China), language barriers and resource constraints (Cambodia and Lao PDR), and a lack of digital tools and internet access (Solomon Islands and Vanuatu). ■ Teachers emphasise the need for government support in infrastructure, training, and curriculum integration. ■ The report highlights the need for gender-responsive pedagogies and online safety measures, particularly for girls.

Resource	Analysis
"Transforming Education through Technology" Masterplan 2030 *Source:* Ministry of Education, Singapore, 2023 *Type of resource: Strategic plan* *Location: Singapore* *Target audience: Educators, students* *Grade focus: Primary, secondary*	**Description:** This strategic plan, building on the previous 2020 EdTech Plan and ICT Masterplans, aims to enhance teaching and learning through technology, addressing the post-Covid-19 pandemic education landscape. It emphasises collaboration, digital resource sharing, and the use of e-pedagogy and learning data for effective tech-enabled experiences. The plan encourages teachers to continuously develop their digital skills and experiment with technology to improve their teaching. **Key features:** The framework has five strategic thrusts that guide how the Ministry of Education will integrate technology more extensively into teaching and learning: – Greater customisation of students' learning – Strengthen the development of students' digital literacy and technological skills – Empower the development of students' 21st-Century Competencies (21CC) – Strengthen school and department cultures of collaboration and EdTech practices – Strengthen teachers' EdTech practice

3.3. Thailand-specific digital literacy resources for teachers

Resource	Analysis
AI User Manual: For teachers, students, schools, and parents in Thailand 2025 *Author:* Office of Academic Affairs and Educational Standards, Office of the Basic Education Commission (OBEC), 2025 *Type of resource: Manual* *Date: 2025* *Target audience: Educators, educational personnel* *Grade focus: Primary, secondary*	**Description:** The 2025 AI User Manual is a practical guide for teachers, students, schools, and parents to use AI safely and effectively in education. It explains key concepts, benefits, and limitations of AI, and offers guidance on how to integrate AI into teaching, learning, and school management. The manual supports teachers in reducing their workloads and enhancing instruction, helps students develop critical thinking skills and access diverse learning resources, and enables schools and parents to better manage and support educational outcomes. **Key features:** The manual is structured into eight sections: 1. Part 1: Introduction to AI 2. Part 2: Usefulness and risks of AI 3. Part 3: Role-based AI utilisation (teachers, students, parents, schools) 4. Part 4: Using AI to support education development in Thailand 5. Part 5: Dos and Don'ts of AI use in schools 6. Part 6: AI learning mastery levels 7. Part 7: Ethical awareness and responsible use of AI 8. Part 8: How schools can prepare for the AI-driven digital era

Resource	Analysis
Digital Competency Development Manual: For Teachers and Educational Personnel *Author:* Office of the Basic Education Commission (OBEC), 2024 *Type of resource: Manual* *Date: 2024* *Target audience: Educators, educational personnel* *Grade focus: Not specified*	**Description:** This manual provides guidelines for developing the digital competencies of teachers and educators according to the Digital Competency Framework. It also lists several courses (from public and private providers) that teachers and educators can enrol in to improve their digital competency. The manual provides actionable steps that educators can take to improve their digital competencies. **Key features:** ■ The Digital Competency Framework is structured into three stages and seven levels, ranging from DC1 to DC3 for Basic Digital Competency, DC4 to DC5 for Intermediate Digital Competency, and up to DC6 to DC7 for Advanced Digital Competency. 1. Basic competencies include a knowledge of available digital technologies and the ability to use them. 2. At the intermediate level, teachers and educators can apply technology to collect data, organise systems, analyse, communicate, and problem-solve. 3. At the advanced level, educators can develop plans, strategies, and policies by using technology. ■ The document includes a long list of digital development courses, including the Digital Competency Development Course accessed via learning-obec.com and endorsed by the Basic Education Commission. ■ OBEC has also engaged with several government and private firms to offer alternative digital competency development courses. These include, but are not limited to, Professional Qualification Institute, Microsoft, Google, Apple, ARIT, International Certification of Digital Literacy (ICDL), and True Digital Academy.

Resource	Analysis
Digital skills of civil servants and government personnel for the transformation to a digital government *Author:* The Office of Civil Servant Commission, 2017 *Type of resource: Framework / Guidelines* *Date: 2017* *Target audience: Civil servants, government personnel* *Grade focus: Not specific to the education sector*	**Description:** Developed in response to a 2017 Cabinet Resolution, this resource provides a framework for developing the digital skills of civil servants and government personnel. The guidelines were developed to support Thailand's goal of transforming into a digital government. The resource is not specific to the education sector. **Key features:** ■ Expected digital competencies are outlined for different government roles such as civil servants, directors of management, academic workers, service workers, and executives. ■ For each role, target responsibilities and competencies are organised across three phases: early, developing, and mature. ■ A set of seven digital skills is also provided for all government personnel: 1. Digital literacy 2. Digital governance, compliance, and standardisation 3. Digital technology 4. Digital process and service design, and assurance 5. Project and strategic management 6. Digital leadership skills 7. Digital transformation skills ■ For each skill, the framework provides a detailed description of the types of ability, sub-ability, and performance criteria.

Resource	Analysis
Understanding the digital skills of civil servants and government personnel *Author:* Thailand Professional Qualification Institute, 2017 *Type of resource: Presentation of framework* *Date: 2017* *Target audience: Civil servants, government personnel* *Grade focus: Not specific to the education sector*	**Description:** A presentation of the Thailand government's approach to building the digital competencies of civil servants and government staff. It provides an overview of the digital competency framework and pathways to develop digital skills, and unpacks the expected criteria and abilities for specific government roles (e.g., executives, academics, management, and so on.) **Key features:** ■ The same information from the 'Digital skills of civil servants and government personnel for the transformation to a digital government' resource (see previous page) is presented in PowerPoint format. ■ The presentation provides more information on identifying the digital skill levels ('basic', 'developing', and 'mature') of civil servants, ■ It also offers additional guidance on the ideal timeline for skills development, from early, 'developing', to 'mature'.

4. Key takeaways

Comprehensive and multidimensional competencies

The frameworks presented in this report often define digital literacy across multiple domains, including pedagogy, digital citizenship, and technological skills. The most common competencies across the global frameworks appear to relate to:

- **Information and data literacy** — Effectively searching, evaluating, and managing digital content.
- **Digital communication and collaboration** — Engaging, collaborating, and managing identity online.
- **Digital content creation** — Creating, modifying, and responsibly using digital content.
- **Safety and digital well-being** — Ensuring cybersecurity, privacy, and responsible technology use.
- **Problem-solving and innovation** — Troubleshooting and creatively applying digital tools.
- **Teaching and learning with technology** — Integrating digital tools into pedagogy and assessment.
- **Professional development and reflection** — Continuously improving digital skills and teaching practices.
- **Empowering learners' digital competence** — Supporting students in responsible and effective digital use.
- **Policy, ethics, and leadership** — Understanding digital policies, ethics, and leading digital transformation.
- **AI literacy and application** — Using AI ethically and effectively in education.

Integration with teacher development

Many frameworks structure competencies across teacher development phases, such as pre-service, in-service, and lifelong learning, ensuring that digital literacy skills evolve alongside educators' careers.

Alignment with competency-based education (CBE)

The frameworks in this list emphasise learner-centred approaches, formative and summative assessments, and flexible learning pathways to ensure that digital skills are integrated into practical, real-world teaching scenarios.

Focus on collaboration and professional development

A key theme across the resources is the importance of professional learning communities, knowledge sharing, and peer collaboration in fostering innovation and continuous professional development, and to ensure the frameworks are used in practice.

Flexibility for local adaptation

The global frameworks are designed to be adaptable to different educational systems and contexts, allowing for regional customisation while maintaining international best practices.

Ethical and responsible use of technology, but limited focus on child safeguarding

Several frameworks, particularly the newer resources, focus on AI, explicitly address AI ethics, data privacy, digital well-being, and responsible technology use, equipping educators with the knowledge to evaluate digital tools critically; however, they do not explicitly address child safeguarding measures.

Limited availability of regional frameworks

While many global frameworks and resources for teacher digital literacy originate from the Global North (primarily Europe and the United States), we found limited applicable frameworks from Southeast Asia. This, however, may be due to our own limitations, including language barriers, limited time, and the scope of this desk review.

Existing regional frameworks lack an education-specific focus

Several regional frameworks, such as the ASEAN Digital Economic Framework Agreement (DEFA) (↑Boston Consulting Group, 2023) and the Framework for Developing Digital Readiness Among ASEAN Citizens (↑ASEAN, 2021), promote digital literacy but are not specifically tailored to education. While the Declaration on the Digital Transformation of Education Systems in ASEAN (↑ASEAN, 2022) focuses on education, it does not provide a comprehensive framework for teachers' digital literacy, so it was not included in the final list.

National resources provide practical guidance on building digital competencies

The guideline for developing digital competencies includes a list of online courses recognised by OBEC that teachers and educators can enrol in to improve their digital competencies.

5. Recommendations

Emphasise ethical and safe technology use, including child safeguarding

Although the Digital Competency Framework for Teachers in Thailand includes an understanding of ethics and digital safety as part of expected basic competency, these elements can be strengthened by expanding on data privacy, cybersecurity, digital well-being, and ethical AI use to protect both teachers and students. Future frameworks could more explicitly integrate child protection principles to ensure safer digital learning environments.

Ensure accessibility and equity

To ensure equitable access to infrastructure, technology, internet and devices, the varying levels of digital literacy among teachers across urban and rural areas should be considered. Existing Thai resources on teacher digital competencies can be further contextualised to meet the needs of local communities.

Support lifelong learning and professional development

Frameworks can provide pathways for teachers to continuously develop digital competencies through self-assessment tools, modular learning options, and peer networks. Several of the resources reviewed provide interactive tools and activities to engage educators in their digital literacy. These could be added to the list of online courses and resources OBEC provides in their guidance document.

Promote collaboration and knowledge sharing

For frameworks to be effectively implemented, communities of practice, such as the One Teacher Thailand network, where teachers can exchange ideas, share best practices, and receive mentorship on digital pedagogy, are fundamental.

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