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Developing University Lecturers' Digital Pedagogical Competence in Vietnam

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A R T I C L E I N F O

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A B S T R A C T

This article examines how selected Vietnamese evidence can inform the development of university lecturers' digital pedagogical competence. A targeted narrative review draws on 19 documents, including five local empirical studies, and compares competence profiles, assessment readiness, and conditions for application. DigCompEdu organizes the proposed tasks; TPACK provides a supplementary explanation of pedagogical choices. The studies identify differentiated needs, uneven readiness dimensions, and constraints on applying technology, with limited independent performance evidence. The synthesis proposes a development cycle connecting diagnosis, supported practice, artifact review, and feedback. Its operational contribution is an explicit link between each component's evidence basis, a course task, a support responsibility, and review evidence, extending the implementation focus of earlier Vietnamese proposals. Empirical findings, conceptual responsibilities, and author-designed applications are distinguished in the framework matrices. Purposive selection, disciplinary concentration, and single-analyst interpretation limit the review. Institutional pilots are proposed to assess the framework's feasibility and usefulness before testing effects on teaching and learning

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INTRODUCTION

Universities increasingly rely on digital platforms to distribute materials, organize learning activities, and assess student work. These arrangements give lecturers more choices, but they also require judgments about the educational purpose of each choice. The OECD (2021) discusses the potential of personalization and learning analytics while drawing attention to equity and implementation difficulties. The availability of a technology therefore raises a professional question: under what conditions can lecturers use it to support worthwhile learning?

Digital pedagogical competence concerns decisions about resources, learning activities, feedback, and participation within a particular course. DigCompEdu identifies the professional domains in which these decisions occur (Redecker, 2017). Technological Pedagogical Content Knowledge (TPACK) offers a complementary explanation of why a technology choice depends on the subject being taught and the learning activity intended (Koehler & Mishra, 2009). The two references serve different purposes in this article: DigCompEdu organizes development tasks, while TPACK supports the interpretation of pedagogical judgment.

Vietnam's policy commitments make this question relevant to university development. The National Digital Transformation Program was approved under Decision No. 749/QD-TTg; Decision No. 131/QD-TTg sets out the education and training transformation scheme; and Decision No. 411/QD-TTg establishes the digital economy and digital society strategy (Prime Minister of Vietnam, 2020, 2022a, 2022b). The digital competence framework introduced by Circular No. 02/2025/TT-BGDDT applies to learners (Ministry of Education and Training, 2025). These instruments provide policy direction, but the needs of lecturers must be examined in relation to their teaching and working conditions.

Vietnamese studies examine competence profiles, readiness for digital assessment, and conditions for applying technology. Their different constructs and settings make them unsuitable for a single estimate of national competence. The question addressed here is how selected evidence can inform development decisions while retaining those differences. The analysis concerns teaching, assessment, learner support, and related professional learning; research productivity and university administration fall outside its scope.

The article links reported development issues to course tasks, support responsibilities, and evidence for review. This connection provides an applied basis for selecting professional learning activities within an institution.

LITERATURE REVIEW

Digital Pedagogical Competence as a Professional Capability

Digital pedagogical competence is understood here as the capacity to select, adapt, and use technologies in ways appropriate to disciplinary objectives, learner needs, and professional obligations. It involves educational judgment as well as technical capability. A lecturer may operate a platform successfully yet still need assistance in designing a task that elicits useful evidence of learning. This distinction informs the development focus adopted in the review.

TPACK explains the interdependence of technological, pedagogical, and content knowledge (Koehler & Mishra, 2009). A simulation, for example, represents a concept through particular assumptions and supports some learning activities more readily than others. This perspective provides a supplementary explanatory basis for discussing the disciplinary fit of the proposed tasks.

Measurement must reflect the claim being made. Confidence indicates perceived capability, and reported frequency describes use. An artifact, such as an assessment task or activity plan, makes aspects of design available for examination; observation provides evidence of enactment. Student work and learning outcomes require further analysis. An artifact review can therefore strengthen diagnosis without, on its own, establishing classroom effectiveness.

DigCompEdu and Professional Development

DigCompEdu provides six domains for organizing development tasks: Professional Engagement, Digital Resources, Teaching and Learning, Assessment, Empowering Learners, and Facilitating Learners' Digital Competence (Redecker, 2017). These domains include professional collaboration, resource management, instructional design, evidence-informed assessment, inclusion, and students' responsible digital participation. Caena and Redecker (2019) explain the framework's relationship to broader teacher competence expectations.

DigCompEdu supplies the professional scope of the proposed tasks. Table 3 distinguishes this conceptual basis from the empirical findings used to inform local priorities.

Basilotta-Gómez-Pablos et al. (2022) identify substantial reliance on self-assessment in higher education research. Trujillo-Juárez et al. (2025) examine the relationship between diagnosed needs and micro-course design, while also noting weaknesses in comparative and longitudinal evaluation. These reviews support considering focused professional learning and a wider range of evidence. They do not establish that a particular training format will be effective in Vietnamese universities.

A development activity can be organized around revision of one course component, with the learning format chosen to suit the need. For feedback design, this could involve examining an existing task and planning how student responses will inform subsequent instruction. The relevant unit of development is the educational problem addressed, rather than attendance at a predetermined package of software instruction.

Existing Vietnamese Proposals and the Present Contribution

Nguyen and Nguyen (2021) propose an online education competence framework for Vietnam National University–Ho Chi Minh City, comprising five groups and three development levels. Their proposal links competence descriptions to training objectives and includes online assessment and standardized course design. Nguyen and Bui (2022) connect digital competence development with both learning activities and the formation of organizational values and beliefs. These precedents already recognize that development extends beyond isolated technical training.

The present work focuses on how those references can inform a specific course decision. It connects the rationale for a task with the assistance required

and the evidence used to review progress. The comparison with earlier proposals concerns this planning function rather than a new set of competence domains.

Responsibility is considered at three levels. Lecturers can revise designs and reflect on their decisions; institutions can address workload, access, guidance, and specialist support; sector actors can coordinate shared resources and references. These levels classify possible responses rather than represent an estimated multilevel model. OECD (2021) and UNESCO guidance provide context for equity and responsible technology use, including generative AI (Miao & Holmes, 2023; Miao & Cukurova, 2024). They are treated as normative references, not measurements of Vietnamese lecturer capability.

METHODOLOGY

Review Design and Source Selection

A targeted narrative review was used to develop an applied framework. Purposive selection addressed three questions: what competence needs are reported, how assessment readiness is described, and which conditions affect application.

The available search record includes English and Vietnamese topic queries, such as "Vietnam university lecturers digital competence DigCompEdu study" and "giảng viên năng lực số đại học nghiên cứu", together with searches on digital assessment, pedagogical integration, and institutional support. Follow-up checks used exact titles and DOIs. Empirical publication records were checked through Vietnam Journal of Education, VNU Journal of Foreign Studies, International Journal of Information and Education Technology, English Language Teaching Educational Journal, and the publisher or institutional repository for the TEDH study. Framework and guidance records were checked through journal websites, Springer Nature, the Joint Research Centre, UNESCO, OECD, and the Vietnamese Government publication portal. These records document source discovery and verification, but do not preserve the complete initial search period or screening counts. No database-wide coverage or reconstructed exclusion totals are claimed.

The corpus contains 19 documents with distinct analytical roles. Five Vietnamese empirical studies published between 2022 and 2026 provide the local evidence in Table 1. Two international reviews inform professional development and its evaluation. Five conceptual publications supply DigCompEdu, its interpretation, TPACK, and the two Vietnamese framework precedents. Four Vietnamese policy documents establish policy context, while three OECD or UNESCO publications address equity and responsible technology use. The empirical publication range describes the selected studies rather than a prospectively registered search window. Empirical eligibility required practising university lecturers or teacher educators in Vietnam, a focus on teaching or professional development, an identifiable journal record, and an accessible full text. Studies confined to school teachers, preservice students, or the general population were outside the local evidence scope. Unverifiable statistics and unevaluated announcements were excluded as evidence.

Extraction Appraisal and Synthesis

Extraction recorded population and setting, recruitment, design, measurement basis, relevant findings, and restrictions on interpretation. The selected studies provide complementary evidence: Do and Nguyen (2025) on reported practices; Nguyen and Duong (2025) on assessment readiness; O'Connor et al. (2026) on support and pilot evaluation; and Dang et al. (2026) on regional application. Hoang et al. (2022) provide contextual evidence on general digital competence because sample accounts are inconsistent. Descriptive appraisal examined measurement, recruitment, intervention design, and reporting consistency. Table 1 records the restrictions applied in synthesis.

Synthesis proceeded by comparing findings within three themes: differentiated competence needs, assessment readiness, and conditions for application. Differences in instruments and populations were retained rather than harmonized into proficiency scores. Relevant teaching issues were related to DigCompEdu domains, and support needs were assigned to actors able to respond. Each proposed framework component was then linked to an empirical finding or conceptual rationale, with its inferential limit stated in Table 2. Domain applications appear in Table 3. One analyst conducted extraction and interpretation without an independent coding check. TPACK remained a supplementary explanation of course design and was not a coding framework. Policy and guidance documents informed the scope of proposals but were not counted as empirical confirmation of their effectiveness.

RESULTS

Competence Profiles Assessment Readiness and Application

Table 1 summarizes the empirical sources and the restrictions governing their interpretation. The synthesis organizes their findings by competence profiles, assessment readiness, and conditions for application.

Hoang et al. (2022) provide contextual evidence of variation across general digital competence domains. Their inconsistent sample accounts preclude a reconciled denominator in this review, and the study is not used as the sole basis for a framework component. Do and Nguyen (2025, p. 243) use a five-point scale of reported practice frequency, from Never (1) to Always (5). Scores are generally high; Assessment has the lowest mean among the six domains (M = 3.75, SD = 0.74). This relative position does not demonstrate an absolute assessment deficit. The scores are not treated as independently assessed or standardized proficiency levels. Differences in instruments and populations also prevent interpreting the contrast between these studies as change over time.

Nguyen and Duong (2025, pp. 78–79) report higher perceived knowledge than confidence and experience. Section 4.2.2 describes confidence as moderate (M = 3.03, SD = 0.87), whereas the Abstract calls it low; the detailed findings are used here. Interviews qualify the depth of reported knowledge and describe practical guidance and peer learning needs. Together with the assessment profile in Do and Nguyen (2025), these findings motivate closer examination of task design and opportunities for practice. They do not establish a mentoring effect or an independently measured difference between perceived competence and performance.

O'Connor et al. (2026) report a baseline survey of 103 teacher educators and pilot feedback from 12 participants in two pedagogical universities. Requests concern subject guidance, development time, resources, and clear tool permissions. Nguyen and Duong (2025) describe gaps in practical guidance. Dang et al. (2026) report varied integration and access constraints among 14 interviewees. Their Table 2 (p. 88) leaves L12 and L13 requiring clarification; the synthesis therefore uses thematic findings without calculating adoption-group proportions. These studies identify support conditions to consider alongside the task attempted.

The resulting development decisions depend on the problem identified: a domain profile prompts diagnosis, limited experience prompts guided practice, and inadequate access requires an organizational response. The sequence below translates these interpretations into proposed actions.

Table 1. Selected Vietnamese Empirical Evidence

Study	Design and setting	Relevant finding	Interpretive restriction
Hoang et al. (2022)	Survey in three universities of education; mainly DigComp 2.1 domains.	Intermediate overall profile; variation across skills and groups.	Contextual evidence only. Abstract reports 320 lecturers plus 150 other participants; Section III.A reports 500 minus 30; Table II totals 416 (pp. 1085–1086). No reconciled denominator or sole-component justification used.
Do and Nguyen (2025)	51 English lecturers; convenience survey and six interviews. Five-point frequency scale: Never (1) to Always (5).	Generally high scores for reported practices; Assessment had the lowest domain mean (M = 3.75, SD = 0.74).	Frequency-based self-report (p. 243). Lowest rank within the sample does not establish an absolute deficit or independently assessed or standardized proficiency.
Nguyen and Duong (2025)	27 EFL lecturers in one northern university; five interviews.	Perceived knowledge above confidence and experience; practical guidance and peer learning issues.	Self-report. Confidence is moderate in Section 4.2.2 (p. 79), M = 3.03, SD = 0.87, but low in Abstract. Detailed findings used; no mentoring effect measured.
O'Connor et al. (2026)	Two pedagogical universities; baseline 103; pilot feedback 12.	Requests for subject guidance, time, resources, and clear tool permissions.	Small pilot and developer involvement; feedback does not establish sustained teaching effects.

Study	Design and setting	Relevant finding	Interpretive restriction
Dang et al. (2026)	14 purposively selected English lecturers; regional interviews.	Varied reported integration and contextual access constraints.	Reported practice. Table 2 (p. 88) leaves L12 and L13 needing clarification; thematic findings used without group proportions.

Source: Author's extraction and descriptive appraisal. EFL denotes English as a Foreign Language. Page and table references identify reporting restrictions in the original studies.

A Framework for Supported Pedagogical Development

Figure 1 organizes diagnosis, supported practice, artifact review, and feedback. Table 2 identifies the empirical findings and conceptual rationales used for each component, followed by the author's proposed development decision and its inferential limit.

Table 2. Evidence Basis and Limits of the Proposed Framework

Component	Evidence or conceptual basis	Proposed development decision	Limit of the inference
Diagnosis	Reported practice profile in Do and Nguyen (2025); contextual variation in Hoang et al. (2022); domain vocabulary from Redecker (2017).	Identify a course need using reflection and a baseline artifact; choose the relevant domain.	Profiles motivate local investigation; they do not set national priorities.
Supported practice	Readiness findings in Nguyen and Duong (2025); development rationale in Trujillo-Juárez et al. (2025).	Pair a selected task with guided practice suited to the diagnosed need.	Accounts and review findings justify consideration; they do not validate this training design.
Artifact review	Self-assessment limitations discussed by Basilotta-Gómez-Pablos et al. (2022); teaching responsibilities in Redecker (2017).	Examine a revised task and its rationale, then collect enactment evidence.	Adding artifact review is the author's design choice; artifact quality alone cannot establish learning effects.
Feedback and reflection	Reflective practice in Redecker (2017); peer learning accounts in Nguyen and Duong (2025).	Discuss review findings and revise the task or the support required.	The ordering and repetition of the cycle are proposed; a causal mentoring effect is not demonstrated.
Institutional support	Support needs in O'Connor et al. (2026)	Name the support owner and	These sources inform responsibilities, not

Component	Evidence or conceptual basis	Proposed development decision	Limit of the inference
	and Dang et al. (2026); organizational development in Nguyen and Bui (2022).	document guidance, development time, and access.	the relative effectiveness of support packages.
Systemic coordination	Policy direction in Prime Minister of Vietnam (2020, 2022a, 2022b); learner expectations in Ministry of Education and Training (2025).	Consider shared resources and reference terms through sector consultation.	A policy-informed proposal; national implementation and certification validity are not evaluated.

Source: Author's synthesis. Evidence identifies issues and conceptual responsibilities; the development decisions and sequence are proposed applications.

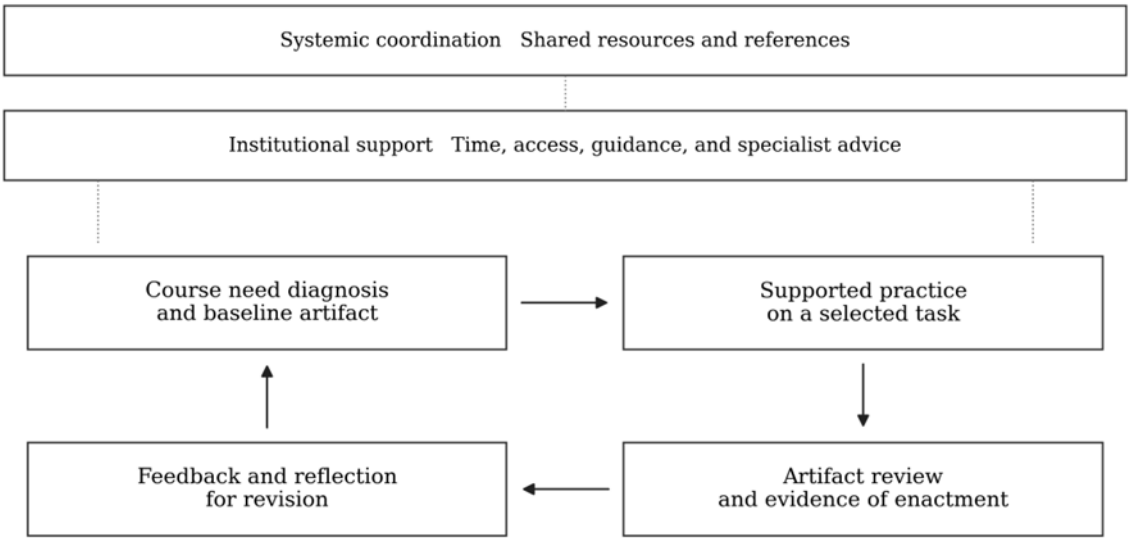


Figure 1. Proposed Cycle of Supported Pedagogical Development
Source: Author's proposed organization of the evidence and conceptual rationales specified in Table 2. Arrows show an intended development sequence, not demonstrated causal effects.

Table 3 translates the six DigCompEdu domains into candidate tasks and identifies the basis of each application. Course-level diagnosis determines which task is relevant; the matrix provides examples for formative development.

Table 3. Proposed Tasks Support and Evidence across DigCompEdu Domains

Domain	Candidate course task	Institutional support	Evidence for review	Basis of application
Professional Engagement	Share and discuss a course revision.	Scheduled peer discussion.	Revision and reflective rationale.	Redecker (2017); peer learning in Nguyen and Duong (2025).
Digital Resources	Select or adapt a resource for a stated objective.	Access, content review, and licensing advice.	Accurate, accessible material with attribution.	Redecker (2017) supplies the task basis; Hoang et al. (2022) provide contextual resource issues.
Teaching and Learning	Design an activity and explain the tool choice.	Subject advice and permitted tools.	Activity aligned with its objective.	Redecker (2017); subject guidance in O'Connor et al. (2026).
Assessment	Revise a task and plan feedback from responses.	Assessment expertise and reliable delivery.	Task validity, elicited evidence, and feedback plan.	Redecker (2017); relative rank in Do and Nguyen (2025); readiness in Nguyen and Duong (2025).
Empowering Learners	Provide alternative routes to participation.	Accessibility guidance and flexible access.	Design addressing participation barriers.	Redecker (2017); access constraints in Dang et al. (2026).
Facilitating Learners' Digital Competence	Ask students to evaluate sources and create responsible digital work.	Examples and clear student guidance.	Work demonstrating critical and responsible participation.	Redecker (2017); learner expectations in Ministry of Education and Training (2025).

Source: Author's task applications. Domain coverage follows Redecker (2017); supplementary evidence is identified by row. Support arrangements and review criteria require local specification.

DISCUSSION

Distinctive Contribution and Its Boundaries

The practical value of the framework is that a development decision can be examined at the level of a course. For example, a relative assessment ranking prompts investigation of a local need, while readiness and guidance findings inform the assistance to consider. Stating the task, support owner, and review

evidence together allows an institution to assess whether the response fits that need.

This approach changes the unit of planning from a broad competence label to a documented course decision. It also introduces an institutional interpretation of review findings: an incomplete artifact may indicate a design problem, an access barrier, or both. Recording support conditions helps make those explanations distinguishable. The framework's usefulness depends on whether this additional documentation improves development decisions without creating excessive workload.

An Illustrative Course Application

Consider a microeconomics lecturer whose students can calculate a tax wedge but struggle to explain tax incidence. The initial artifact would be the existing activity and a sample of anonymized student reasoning. A proposed revision could ask students to predict an outcome, vary demand and supply elasticities in a spreadsheet, and explain the distribution of the tax burden. TPACK helps explain the connection between the economic content, the learning activity, and the spreadsheet representation.

The department would identify the relevant assistance, such as subject advice on the model's assumptions, assessment guidance on explanatory prompts, and reliable device access. Review would examine whether the model is accurate, whether the task elicits the intended reasoning, and whether students can participate through accessible alternatives. Feedback would guide revision before implementation. After teaching, student explanations and participation would provide evidence beyond the quality of the plan.

This author-developed illustration shows how the planning approach could be adapted to another discipline. Reviewers would distinguish a justified design awaiting classroom evidence from one supported by implementation evidence, using agreed criteria and recorded reasons.

Institutional and Systemic Implications

At institutional level, the framework directs attention to the relationship between the task and the constraint. A platform problem requires technical assistance; uncertainty about what an assessment measures requires pedagogical expertise; lack of access requires a resource decision. Professional development teams can use this distinction to coordinate assistance and interpret outcomes without attributing every difficulty to lecturer capability.

At systemic level, the policy documents provide direction, and Circular No. 02/2025/TT-BGDDT specifies learner expectations. Shared examples, reference terminology, and cooperation between universities are policy-informed proposals that would require sector consultation.

Responsible AI use can be incorporated when relevant to the chosen course task. Checking generated materials, explaining acceptable assistance, and protecting identifiable student data draw on UNESCO guidance (Miao & Holmes, 2023; Miao & Cukurova, 2024). This is a normative extension of the proposed tasks; the empirical corpus does not measure Vietnamese lecturers' AI competence.

Limitations

Purposive selection and an incomplete discovery log constrain coverage and replication. English teaching and teacher education dominate the empirical corpus, and one analyst undertook extraction and interpretation. Appraisal was descriptive rather than a standardized risk-of-bias assessment. The complete development cycle has not been tested; the matrices are planning proposals, not validated competence instruments.

Most local findings concern perceptions or reported practices, with limited independent classroom and learner-outcome evidence. Six-domain coverage rests on DigCompEdu, while sector-level recommendations rely on policy interpretation. These evidential differences limit claims about effectiveness and transferability.

CONCLUSIONS AND RECOMMENDATIONS

Institutions can use the proposed cycle to plan professional learning around an identified course problem. A pilot should document the task selected, support delivered, and changes in design and teaching practice.

Recommendations for Lecturers and Institutions

An institutional pilot should select a course problem through a baseline artifact and lecturer reflection, then identify the support required for revision. The department should agree on the scope, available time, reviewers, and criteria before practice begins. Participation in training, design quality, classroom enactment, and learner outcomes should be recorded separately. Table 4 specifies an implementation sequence and the evidence to collect.

For review, institutions can use criteria concerning disciplinary accuracy, alignment with the learning objective, the evidence elicited for feedback, and equitable participation. Reviewers should record their reasons and allow revision. Expansion should depend on feasibility, consistency of review, and evidence of application, including whether the support promised was actually available.

Table 4. Proposed Implementation and Monitoring Sequence

Stage	Responsibility	Action	Monitoring evidence
Diagnose	Lecturer and development team	Review self-reflection and a baseline course artifact.	Identified need and documented starting point.
Support practice	Department and support specialists	Provide relevant learning, guidance, resources, and time.	Application progress and access barriers.
Review practice	Prepared peers and lecturer	Review alignment, feedback evidence, and fairness; permit revision.	Criterion-level evidence and reviewer differences.
Evaluate and adapt	Institutional quality team	Follow enactment and learner experience before expanding.	Sustained practice, participation, and feasibility.

Source: Author's implementation proposal derived from Tables 2 and 3. Institutions must define feasible monitoring criteria and protect identifiable learner data.

Recommendations for Systemic Coordination

Sector actors could support exchange of adaptable teaching examples and resources, with clear arrangements for ownership, updating, and access. Consultation should establish how lecturer development relates to learner expectations across disciplines and institutions. Any use for certification or professional appraisal would require separate evidence of assessment validity, consistency, and fairness.

FURTHER STUDY

Future research should first examine whether institutions and lecturers can use the framework to make coherent development decisions. A feasibility study could record the needs identified, support provided, time required, revisions made, and differences between reviewers. Sampling beyond English teaching and teacher education would show which adaptations are necessary across disciplines and institutional resources.

Subsequent intervention research could compare the proposed approach with existing training arrangements using baseline and follow-up artifact reviews, observation, interviews, and student work. Comparison groups, where feasible, would help account for selection and concurrent changes. Learning and inclusion should be examined as outcomes rather than inferred from attendance or satisfaction. A broader review with specified database coverage and independently checked extraction would strengthen the evidential basis for this evaluation.

REFERENCES

Basilotta-Gómez-Pablos, V., Matarranz, M., Casado-Aranda, L. A., & Otto, A. (2022). Teachers' digital competencies in higher education: a systematic literature review. International journal of educational technology in higher education, 19(1), 8. https://doi.org/10.1186/s41239-021-00312-8

Caena, F., & Redecker, C. (2019). Aligning teacher competence frameworks to 21st century challenges: The case for the European Digital Competence Framework for Educators (DigCompEdu). European Journal of Education, 54(3), 356–369. https://doi.org/10.1111/ejed.12345

Cukurova, M., & Miao, F. (2024). AI competency framework for teachers. UNESCO Publishing.

Dang, T. B. D., Le, V. L., Tran, T. D., & Nguyen, H. T. (2026). From beliefs to practices: University English lecturers' digital technology integration in a regional Vietnamese context. English Language Teaching Educational Journal, 9(1), 83–96. https://doi.org/10.12928/eltej.v9i1.15664

Do, M. P. T., & Nguyen, H. M. (2025). Digital competence of English lecturers in Vietnam. Vietnam Journal of Education, 9(2), 238–252. https://doi.org/10.52296/vje.2025.473

Hoang, T. S., Nguyen, M. L. T., Pham, L. N., Nguyen, T. H. T., & Nguyen, L. T. (2022). Digital competence of lecturers at the universities of education: In the context of education digital transformation Vietnam. International Journal of Information and Education Technology, 12(10), 1085–1089. https://doi.org/10.18178/ijiet.2022.12.10.1724

Holmes, W., & Miao, F. (2023). Guidance for generative AI in education and research. Unesco Publishing. https://chinhphu.vn/?classid=1&docid=212648&pageid=27160&typegroupid=6

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? Contemporary Issues in Technology and Teacher Education, 9(1), 60–70. https://citejournal.org/volume-9/issue-1-09/general/what-is-technological-pedagogicalcontent-knowledge/

Ministry of Education and Training. (2025). Circular No. 02/2025/TT-BGDDT of January 24, 2025, prescribing the digital competence framework for learners.

Nguyen, A. T., & Bui, T. H. (2022). Recommendations to develop lecturers' digital competence framework in Vietnam. VNU Journal of Science: Policy and Management Studies, 38(3), 83–94. https://doi.org/10.25073/2588-1116/vnupam.4407

Nguyen, D. T., & Nguyen, H. T. (2021). Proposing an online education competence framework for Vietnam National University – Ho Chi Minh City lecturers. VNUHCM Journal of Social Sciences and Humanities, 5(4), 1399–1411. https://doi.org/10.32508/stdjssh.v5i4.653

Nguyen, T. T. L., & Duong, T. M. (2025). EFL lecturers' readiness for digital transformation in assessment: A case study in a northern Vietnamese university. VNU Journal of Foreign Studies, 41(6), 71–85. https://doi.org/10.63023/2525-2445/jfs.ulis.5564

O'Connor, J., Garbett, G., Cui, V., Wheatcroft, L., Le Quang, V., & Kiem, M. T. (2026). Supporting the digital transformation of teacher education in Vietnam: Developing and evaluating a teacher educators' digital hub (TEDH). Practice: Contemporary Issues in Practitioner Education, 8(2), 115–130. https://doi.org/10.1080/25783858.2026.2647741

OECD. (2021). OECD digital education outlook 2021: Pushing the frontiers with artificial intelligence, blockchain and robots. OECD Publishing. https://doi.org/10.1787/589b283f-en

Prime Minister of Vietnam. (2020). Decision No. 749/QD-TTg of June 3, 2020, approving the National Digital Transformation Program to 2025, with orientations to 2030. https://vanban.chinhphu.vn/?docid=200163&pageid=27160&tagid=7&type=1

Prime Minister of Vietnam. (2022a). Decision No. 131/QD-TTg of January 25, 2022, approving the scheme on strengthening information technology application and digital transformation in education and training during 2022–2025, with orientations to 2030. https://vanban.chinhphu.vn/?docid=205236&pageid=27160

Prime Minister of Vietnam. (2022b). Decision No. 411/QD-TTg of March 31, 2022, approving the National Strategy for the Development of the Digital Economy and Digital Society to 2025, with orientations to 2030. https://chinhphu.vn/?docid=205555&pageid=27160

Redecker, C. (2017). European framework for the digital competence of educators: DigCompEdu (Y. Punie, Ed.). Publications Office of the European Union. https://publications.jrc.ec.europa.eu/repository/handle/JRC107466

Trujillo-Juárez, S.-I., Chaparro-Sánchez, R., Morita-Alexander, A., Escudero-Nahón, A., & Delgado-González, A. (2025). Strengthening teacher digital competence in higher education through micro-courses: A systematic literature review. Discover Education, 4, Article 247. https://doi.org/10.1007/s44217-025-00687-0