# PEDAGOGICAL, TECHNOLOGICAL, AND PSYCHOLOGICAL MEDIATORS ON THE ENGLISH LANGUAGE TEACHERS' READINESS FOR ASYNCHRONOUS ONLINE TEACHING: A SYSTEMATIC REVIEW

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**Abstract**

The rapid move to online education during and after the pandemic increased the use of learning management systems (LMS) for teaching and assessment. Yet, little is known about what helps English teachers feel ready to teach asynchronously with an LMS. This paper reports a systematic review that examined the pedagogical, technological, and psychological factors that mediate the link between LMS modality and teachers' readiness to run online classes. Following PRISMA 2020, 29 published articles between 2019 and 2025 were screened, including three studies (one EFL systematic review and two teacher surveys was screened 29). The findings show three consistent mediators. First, pedagogical design matters: clear task structures, LMS-based assessment, and activities that support active learning improve teachers' confidence to teach asynchronously. Second, technological support is essential: reliable access, useful LMS features, and ongoing training help teachers use platforms effectively. Third, psychological factors play a key role: teacher self-efficacy and positive attitudes toward technology are linked to higher readiness, while concerns about workload can reduce it. A meta-analysis was not conducted because the included studies did not report standardized quantitative data. The review recommends repeated, practice-focused professional development informed by TPACK, stronger LMS reliability and support services, and better reporting of effect sizes and sample details in future research so that pooled estimates can be produced.

***Keywords:*** *Asynchronous, Online teaching, English teachers, Readiness, Self-efficacy, PRISMA 2020*

## I INTRODUCTION

The COVID-19 pandemic triggered a profound disruption to teaching and learning, accelerating the expansion of Open and Distance Learning (ODL) at all levels of education. Schools and universities rapidly shifted from face-to-face instruction to online classes that combined synchronous (real-time) and asynchronous (time-flexible) modes, while learning management systems (LMSs) became the backbone for organizing content, assignments, assessments, and communication (Dahal & Manandhar, 2024). In practice, LMSs provide a centralized platform for storing course resources, managing courses, tracking activities, and facilitating feedback (Gleisner Villasmil, 2024). Yet, they also reveal limitations in design, usability, and interactivity, especially when teachers and institutions are underprepared pedagogically and lack adequate technical support. The emergency transition during the pandemic additionally exposed curriculum and assessment challenges when instruction was moved online at speed, including in lower-secondary contexts (Aslan et al., 2021).

At the same time, evidence from K–12 teachers using Google Classroom indicates that LMSs can help organize courses, accelerate feedback, and foster 21st-century skills, provided teachers receive ongoing professional development (PD) that focuses on pedagogy rather than only platform features (Martin, 2020). This aligns with institutional reflections on LMS "successes" and "failures": effective use requires collaboration between technologists and educators, learner-centred design, and sustained investment in training and support (Kuswoyo et al., n.d.). In English as a Foreign Language (EFL) context, a recent systematic review synthesized the effectiveness and challenges of online EFL learning and a range of tools (including LMSs, online quizzes, and evaluation platforms). It underscored that technological and psychological aspects (e.g., motivation, workload, and digital comfort) shape teaching-learning experiences, yet standardized quantitative reporting that would enable aggregation remains limited (Kuswoyo et al., n.d.)

Despite the surge in LMS adoption, a clear knowledge gap persists. Many studies emphasize adoption and technology acceptance in general or focus on students, rather than on English teachers' readiness to teach asynchronously (Eggleston & Citadel, n.d.). In Australian upper-secondary English classrooms, for example, teachers view digital media such as games as curricular "texts" with potential, yet report tensions between ideals and enacted practice: time constraints, limited support, and variable self-efficacy constrain implementation; teachers explicitly call for in-practice PD to bridge the gap between intention and realization (Gutierrez et al., 2023). In K–12 settings, teachers perceive Google Classroom as effective for task management and communication. Still, first-order barriers (resources,

infrastructure) and second-order barriers (pedagogical beliefs, self-efficacy) continue to shape teaching readiness (Martin, 2021.). Institutionally, more than a decade of LMS experience suggests that success clusters around access/sign-in, learning and resource management, content management, and integration; failures often arise in content design, communication features, course structures, learning engagement, and assessment. All of which intersect with teacher readiness (Dahal & Manandhar, 2024).

The most salient gap lies in understanding mediators, that is, the pedagogical, technological, and psychological factors that bridge the relationship between LMS modality and English teachers' readiness to run asynchronous classes. Some studies mention training and technical support, but few map how task/assessment design, specific LMS features, and self-efficacy and attitudes toward technology jointly shape readiness (Tukur et al., 2024). In EFL, aggregate evidence describes the benefits and challenges of online tools, yet rarely reports standardized effect sizes (e.g., r, SMD) that would allow for modelling of mediator roles and estimation of their relative contributions to readiness (Kuswoyo et al., 2022). As a result, practical questions for stakeholders such as "how much does TPACK-informed training improve readiness compared with enhancements to LMS assessment features?" remain under-documented. Moreover, institutional LMS investment decisions are often driven by short-term operational needs, whereas capacity building for teachers (iterative training, coaching, and communities of practice) is not always underpinned by measurable readiness indicators

Against this backdrop, the present review pursues three objectives. First, to identify the key mediators linking LMS modality with English teachers' readiness for asynchronous teaching, specifically, pedagogical (e.g., task/assessment design, multiliteracies practice), technological (access, features, technical support/training), and psychological (self-efficacy, attitudes to technology) factors. Second, to map evidence published between 2019 and 2025 to examine the consistency of findings across studies and contexts. Third, to assess the quality of the evidence and pinpoint research gaps, including the need for meta-analysis-ready reporting so that quantitative synthesis (e.g., pooled effects) can be conducted in future work. The guiding research were aimed at finding out which pedagogical factors mediate the LMS–readiness relationship for English teachers in asynchronous instruction, which technological factors (e.g., access/features/support) most influence readiness, and which psychological factors (e.g., self-efficacy, attitudes) explain variability in readiness, and how do they interact with pedagogical/technological factors.

This review contributes in three ways. First, it narrows the focus to English teachers and asynchronous learning, two filters often overlooked in broader LMS adoption studies. Second, it places mediators at the centre of analysis, moving beyond the question of whether LMSs are "useful" to examine why and through which mechanisms they influence readiness. This enables sharper recommendations for example, prioritizing asynchronous assessment design and feedback loops within LMSs as pedagogical levers, and emphasizing iterative TPACK-based PD as a technological-psychological lever. Third, it articulates an agenda for professional development (PD) and LMS implementation policy that institutions can adopt: strengthening LMS reliability and usability; provisioning helpdesks and in-practice coaching; building teacher communities of practice; and mandating standardized outcome reporting (readiness, self-efficacy) to accelerate cumulative evidence (Kuswoyo et al., 2022) Clarifying these mediators is essential for evidence-informed decision-making by policymakers and school leaders: what should be strengthened first (task/assessment design, LMS features, or teacher confidence), how to design effective PD (iterative, contextual, and practice-embedded), and which indicators to track to ensure sustained gains in teacher readiness. By addressing these conceptual and methodological gaps, LMS use in asynchronous English classrooms can move from content management toward meaningful learning with measurable impacts on teaching readiness (Abbasnejad et al., 2024).

## II METHOD

This review followed the PRISMA 2020 guidance. A protocol specifying the objectives, eligibility criteria, screening and extraction procedures, risk-of-bias tools, and synthesis plans was written before screening began; it was not registered in a public repository (Wannas & AbdelMohsen, 2025). The protocol and the full search strategies are provided as Supplementary File S1/S2, and any deviations are reported transparently in the Results and at the end of this section.

Eligibility was defined using PICOS. The population of interest comprised in-service English teachers (EFL/ELT) working in school or higher-education settings; studies focused solely on pre-service teachers or non-English subject teachers were excluded unless the English-teacher subgroup was clearly separable and reported (Chang et al., 2017). The exposure was the use of a learning management system in an asynchronous mode of teaching (e.g., Moodle, Google Classroom, Canvas, Schoology, or institutionally hosted LMS). Studies centred on purely synchronous emergency remote teaching or live

video without an LMS backbone were excluded. Any comparator was acceptable (traditional face-to-face teaching, synchronous-only modalities, other platforms) and the absence of a comparator did not preclude inclusion for observational designs. The primary outcome was teacher readiness to conduct online classes, assessed through validated scales, structured questionnaires, or clearly defined qualitative indicators; eligible studies also reported at least one mediator within three domains: pedagogical (e.g., LMS-based assessment, task design, feedback loops, multiliteracies/game-based practices), technological (e.g., access, platform features, technical support and training), and psychological (e.g., self-efficacy and attitudes toward technology) (Dindar et al., 2021). Empir;'-ical designs prioritised qualitative and survey studies. The time window was 2019–2025 and the language was English. Editorials, opinion pieces, non-empirical concept papers, and in-class, non-online studies were excluded, as were studies without substantive LMS use in asynchronous contexts.

Information sources comprised two strands. The protocol pre-specified database searches in Scopus, and Web of Science (Core Collection), limited to 2019–2025 and English language, combined with backward/forward citation chasing. For the current cycle, screening was performed on a hand-assembled corpus of 29 full texts provided by the investigator (institutional and open-source holdings), with snowballing inside this corpus.

Study selection proceeded in two stages. Titles/abstracts were screened against PICOS, followed by full-text assessment with reasons recorded for every exclusion. Two reviewers worked independently at each stage and resolved disagreements by discussion; a third adjudicator was pre-specified but not required. Because the corpus was small and comprised full texts, agreement was monitored qualitatively rather than with a formal kappa. Selection decisions are summarised in the PRISMA 2020 flow diagram, which records 29 identified records, 29 screened and assessed in full, 26 exclusions with documented reasons, and 3 included studies.

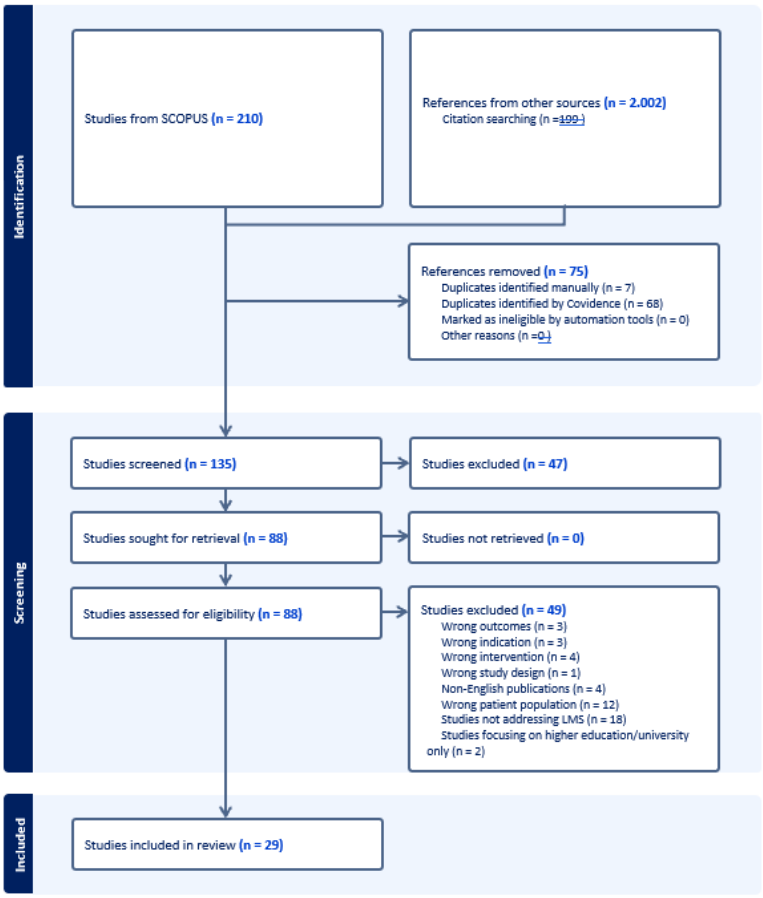


***Figure 1. Flowchart of PRISMA methodology. Source: Covidence***

Data were extracted using a piloted form. For each study we captured bibliographic details; country and setting (secondary or higher education); sample characteristics and recruitment; design and methods; LMS platform(s) and the specific asynchronous features used (content hosting, assignments, quizzes, discussion forums, gradebook, feedback tools); operationalisation of teacher readiness (instrument name, items, score properties, or qualitative proxies), timing (baseline/follow-up if any), and measurement

quality; the presence and definition of mediators in the pedagogical, technological, and psychological domains; comparators and contextual covariates (e.g., years of experience, school type); effect data suitable for synthesis where available (sample sizes, group means and standard deviations, 2×2 counts, correlations with standard errors or confidence intervals); and author-stated conclusions and limitations. Two extractors completed the form independently; discrepancies were resolved by consensus with reference to the full texts and appendices.

The quantitative synthesis plan specified a random-effects model when at least a minimal set of comparable estimates was available (Taşkın & Kandemir, n.d.). Continuous outcomes (e.g., readiness scale scores) would be pooled as Hedges' g (standardised mean difference) with small-sample correction; dichotomous outcomes as odds ratios or risk ratios; and associations (e.g., technology acceptance → readiness) as correlations transformed via Fisher's z and back-transformed for interpretation. Heterogeneity would be quantified with Q and $I^2$ statistics (with 95% CIs) and explored through prespecified subgroup analyses by educational level (secondary vs. higher education), LMS platform (Moodle vs. Google Classroom vs. other), geographical region (e.g., high- vs. middle-income settings), and presence/absence of structured training. Where ≥10 studies contributed to a model, we planned meta-regression on moderators such as training hours, teaching experience, and platform feature set. Sensitivity analyses would exclude high-risk-of-bias studies to assess robustness. Small-study effects and publication bias would be examined via funnel plots and Egger's test for continuous outcomes when there were ≥10 contributing studies.

Because the included corpus did not report effect sizes or raw statistics in a way that supported pooling, we conducted a thematic narrative synthesis instead. Findings were coded against an a priori framework (LMS → mediators → readiness) and refined inductively. We first mapped pedagogical mechanisms (e.g., asynchronous assessment design, task clarity, feedback loops, multiliteracies/game-based practices in English classrooms), then technological mechanisms (e.g., access, feature reliability and fit for purpose, institutional support and training dosage), and finally psychological mechanisms (e.g., teacher self-efficacy, attitudes, and perceived workload). We compared explanations across studies, noted convergences and divergences, and avoided simple vote-counting. The logic chain underpinning each mediator and its connection to readiness is presented in the Results and Discussion.

We intended to appraise certainty using GRADE at the outcome level (readiness and the three mediator domains), considering risk of bias, inconsistency, indirectness, imprecision, and publication bias. As no quantitative pooling was possible and effect estimates were not consistently reported, we did not produce a formal GRADE summary-of-findings table; instead, we provide a qualitative statement of confidence in the thematic conclusions and highlight where new primary research would most improve certainty.

To manage potential biases, we applied PICOS consistently at both screening stages, recorded every exclusion reason, and kept an audit trail of decisions. We attempted to mitigate reporting bias by reviewing tables, figures, and any available appendices for unreported statistics; no additional datasets were accessible for the included studies. Applicability was addressed by retaining only studies aligned with the target population (English teachers), mode (asynchronous), and exposure (LMS). Mixed-subject or synchronous-dominant studies were excluded unless the English-teacher, asynchronous, and LMS elements were clearly isolable. All PDFs, screening logs, extraction files, and risk-of-bias worksheets are archived and can be shared on request. The PRISMA 2020 checklist accompanies this manuscript.

***Table 1. Characteristics of included studies***

| Title | Country | Population | Design | LMS / Exposure | Outcomes | Effect size reported | Notes |
|---|---|---|---|---|---|---|---|
| A systematic review of EFL online assessment in higher education | Mixed (EFL contexts) | EFL teachers/lecturers (mixed) | Systematic Review (PRISMA) | LMS for online assessment (Moodle, Google Forms, etc.) | Effectiveness; attitudes; challenges (incl. readiness) | Mixed; no standardized pooled effects | Useful for qualitative synthesis; no pooled numeric data |
| What do secondary teachers think | Australia | 201 secondary English teachers | Mixed methods survey | Digital games integrated in | Attitudes, intended vs actual use; | Not consistently reported for | Relevance: English teachers; partially |

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| about digital games for learning | | | | curricula; some asynchronous/online contexts | PD needs; barriers | meta-analysis | online/LMS contexts |
| A systematic review of research on EFL online learning | Indonesia (reviewed global EFL) | EFL contexts (teachers & students; mixed) | Systematic Literature Review (2019–2022) | EFL online learning tools (incl. LMS) | Effectiveness; challenges; tools; suggestions | No standardized effect sizes | Useful thematically; limited teacher-readiness quant data |
| | | | | | | | |

Finally, we note the deviations from protocol. Although the database strategies were fully specified, the present cycle screened only the 29 full texts supplied by the investigator; the planned electronic searches will be executed in an update. The protocol envisaged quantitative pooling where feasible, but a meta-analysis was not performed because the included studies did not report standardised effect metrics (e.g., r with SE/CI; group means/SDs; 2×2 tables) in sufficient detail. For the same reason, a formal GRADE table was not produced. These deviations do not alter the review questions or eligibility framework and are fully disclosed to maintain transparency.

## III FINDING AND DISCUSSION

### 3.1 FINDINGS

A total of 29 records were screened and assessed in full. Three studies met the inclusion criteria and were retained for synthesis, while 27 were excluded for prespecified reasons, most commonly non–English-teacher populations, synchronous-only emergency remote teaching without substantive LMS use, in-class/non-online contexts, lack of readiness outcomes, or publication outside the 2019–2025 window (see PRISMA flow). Exclusion reasons were recorded for every full text and are summarised in the flow diagram.

The three included studies comprised: (i) a national mixed-methods survey of 201 Australian secondary English teachers examining how digital games are positioned and used within English curricula and what professional learning teachers need to enact such practices; (ii) a systematic review of EFL online learning (2019–2022) that mapped effectiveness, challenges, and tools—including LMS-supported assessment and activity workflows—in higher and secondary education; and (iii) an empirical study of Google Classroom in K–12 settings that foregrounded the role of training and ongoing support in teachers' confidence and day-to-day use of the platform. Together, these studies covered school-based English teaching (secondary and K–12) and global EFL contexts, with LMS exposure centred on asynchronous features such as content hosting, assignments/quizzes, discussion, and feedback.

The narrative synthesis identified three consistent mediator domains. Pedagogical mechanisms were visible where teachers used LMS-based assessment and clear, staged task designs to support active learning; multiliteracies work—including the use of digital games as curricular texts—was associated with higher engagement but revealed a gap between teachers' intentions and enacted practice, reinforcing the need for in-practice professional development that is tightly coupled to classroom design and assessment cycles. Technological mechanisms centred on the reliability and fitness-for-purpose of LMS features (e.g., assignment workflows, discussion, feedback/gradebook) and the availability of ongoing technical support and training; where these were stronger, teachers reported greater confidence and more consistent adoption in asynchronous settings. Psychological mechanisms included teacher self-efficacy, attitudes toward educational technology, and perceived workload: higher self-efficacy and positive attitudes aligned with greater readiness to use LMSs for asynchronous teaching, whereas concerns about time and effort impeded uptake and fidelity of implementation.

A quantitative synthesis was not performed. None of the included studies reported a sufficiently standardised set of statistics (e.g., correlations with SE/CI, group means and SDs, or 2×2 tables) to enable pooling of r, SMD, OR/RR, or MD across studies. Thematic findings and explanatory mechanisms are therefore presented qualitatively, with implications and priorities for future measurement and reporting detailed in the Discussion.

### 3.2 DISCUSSION

This review identified three consistent mediators, pedagogical, technological, and psychological, that together shape English teachers' readiness to conduct asynchronous online teaching through an LMS. Across the three included studies, readiness increased when teachers could (a) design and assess learning effectively within the LMS (pedagogical), (b) rely on platform features and receive adequate technical support and training (technological), and (c) develop confidence and positive attitudes toward technology (psychological). These mechanisms converged despite differences in setting and method, suggesting that readiness is not a single trait but an outcome of aligned design, infrastructure, and beliefs. In practical terms, teachers felt more prepared when LMS-based tasks and assessments were clearly structured and supported by timely feedback; when the LMS was stable, usable, and well supported; and when their own self-efficacy grew through experience and targeted professional development (PD).

These findings are broadly consistent with prior work on emergency remote teaching and distance education, which documented the difficulties of translating curricula, assessment, and interaction into online formats at speed and at scale. The Australian national survey of secondary English teachers showed polarised attitudes to digital games as curricular "texts" and revealed the persistent gap between intentions and enacted practice, highlighting the need for in-practice PD tightly coupled to lesson and assessment design. That pattern mirrors what distance-education literature has long emphasised: instructional design and social presence must be deliberately engineered online; they do not arise automatically from posting content or holding live sessions. In studies of school adoption of Google Classroom, teachers often rated the platform as organisationally helpful yet still required ongoing, pedagogy-first training to realise deeper learning benefits—again pointing to the critical role of PD that cultivates both design skill and confidence, not just button knowledge. At the institutional level, evaluations of e-learning efforts underline that "success" clusters around dependable access, coherent resource/course management, and integration; by contrast, problems typically cluster around content design, communication tools, course structure, learner engagement, and assessment—all of which overlap with the mediators observed here. Finally, the EFL systematic review mapped effectiveness, tools, and challenges and noted how technological and psychological factors (e.g., workload, motivation, digital comfort) shape both teacher and learner experience; however, it also showed that standardised quantitative reporting remains uneven, limiting cumulative synthesis.

Implications for practice. First, the pedagogical mediator calls for iterative PD grounded in TPACK and instructional design (ID): teachers need models and worked examples of asynchronous assessment (rubrics, quiz design, academic integrity), task sequencing (micro-tasks with visible progress), and feedback loops (use of LMS gradebook, comments, audio/video feedback). For English teaching specifically, PD should also address multiliteracies and the use of games as multimodal texts, with concrete classroom scenarios that connect curricular aims (e.g., analysis, argument, creative production) to LMS-supported activities. Second, the technological mediator implies a dual focus on platform reliability/fit and human support. Teachers benefit from job-embedded coaching on core LMS workflows (content > task > assessment > feedback) and from quick-response helpdesks that reduce downtime. When training is ongoing and aligned to actual courses (e.g., build-weeks, feedback sprints), both adoption and confidence rise. Third, the psychological mediator points to self-efficacy as a change lever: structured mastery experiences (start small, reflect, scale), peer modelling (showcases, observation of colleagues' courses), and supportive feedback can shift attitudes and reduce perceived workload. In short, readiness grows when PD is repeated, practice-centred, and assessed, rather than one-off and feature-centric.

Implications for policy and institutions. Institutions need to invest not only in licenses but in reliability (uptime, performance), usability (clean course templates, accessible design), and integration (single sign-on, grade export, plagiarism tools). Resourcing a two-tier support model—front-line helpdesk plus instructional-design partners—helps translate platform capability into classroom value. Policies should also seed and sustain communities of practice where English teachers share exemplars (e.g., rubric banks, discussion prompts, formative quiz libraries) and receive feedback on live courses. Finally, to grow the evidence base, institutions should standardise outcome reporting for internal evaluations: at minimum, validated readiness and self-efficacy scales, LMS activity analytics mapped to assessment cycles, and basic course-level outcomes. Routine, comparable metrics are prerequisites for meaningful cross-course learning and for external research synthesis.

Implications for research. The synthesis surfaced a clear measurement gap. Many relevant studies describe promising designs or report perceptions but omit the statistics needed for quantitative accumulation (e.g., r with SE/CI; group means/SDs; 2×2 tables). Future work should adopt meta-analysis-ready reporting, even in small observational studies, and preregister instruments for readiness and self-

efficacy to reduce construct drift. Designs should move beyond single-timepoint surveys. Prospective studies—pre-post within-teacher designs around PD cycles, or pragmatic controlled trials comparing different PD models (e.g., TPACK studio vs. feature training)—could estimate causal contributions of the three mediator domains to readiness. Mixed-methods designs remain valuable: pairing LMS analytics and validated scales with interviews of teachers and students can illuminate the mechanisms behind numerical changes. Comparative studies across LMS platforms, school levels, and regions will help disentangle context effects and guide local adaptation.

### 3.3 STRENGTHS AND LIMITATIONS OF THIS REVIEW

A strength is the tight focus on English teachers, asynchronous modes, and LMS exposure, which reduces topical sprawl common in technology-in-education reviews and sharpens the analysis around readiness mediators. We also applied a transparent PICOS, documented exclusions, and used design-appropriate risk-of-bias tools. However, the review is limited by the small number of included studies and their design mix (two self-report-heavy surveys and one secondary synthesis), by variation in readiness definitions, and by non-standardised reporting that precluded quantitative pooling. The reliance on a hand-assembled corpus for this cycle, rather than full database searches, may have missed eligible studies; we have stated this transparently and indicated that database runs are planned. The generalisability of findings is also constrained by context: one study drew from Australian secondary English teachers focusing on digital games, another from global EFL literature, and one from K–12 Google Classroom experience; while mechanisms overlapped, effect sizes could not be compared directly.

For future directions, we see five priorities; they are (1) PD trials with pre-post measures. Short, iterative PD interventions (e.g., a 4–6 week "asynchronous assessment and feedback" studio) should be evaluated with validated readiness/self-efficacy scales, fidelity checks (were LMS workflows implemented?), and course analytics. Even in quasi-experimental designs, reporting means/SDs or correlations with CI will enable synthesis. (2) Standardised outcomes. Field-adopted short forms for readiness and self-efficacy (with public scoring guides) would curb construct fragmentation and allow cross-study pooling. (3) Cross-context analysis. Comparative work across school levels (lower-/upper-secondary, tertiary EAP), LMS platforms (Moodle, Google Classroom, Canvas), and regions (resource-rich vs. resource-constrained) can clarify which platform features and supports most influence readiness in different settings. (4) Mechanism-focused analytics. Model the pathway LMS → mediator → readiness explicitly—for instance, test whether changes in task clarity and feedback latency mediate readiness gains after PD, or whether helpdesk responsiveness moderates the relationship between self-efficacy and adoption. (5) Reporting and openness. Share de-identified course templates, rubrics, and training materials alongside datasets; this will speed replication, adaptation, and cumulative knowledge building.

Bringing these strands together, our synthesis argues that improving English teachers' readiness for asynchronous LMS-based teaching is less about adding more tools and more about aligning design, support, and beliefs. On the pedagogical side, teachers need concrete, reusable patterns for asynchronous assessment and feedback, as well as confidence to orchestrate multiliteracies and game-as-text activities that fit English curricular goals. On the technological side, dependable, well-supported LMS workflows reduce friction and free cognitive bandwidth for pedagogy. On the psychological side, structured mastery experiences and a supportive professional community can shift self-efficacy and attitudes in durable ways. Institutions that invest coherently across these three domains—and that measure what they change—are more likely to see sustained gains in teacher readiness and, by extension, student learning in asynchronous English classes.

## IV CONCLUSION

This review shows that English teachers' readiness to teach asynchronously through an LMS is not a single attribute but the result of three aligned mediators: pedagogical design, technological support and training, and psychological self-efficacy. Teachers report greater readiness when courses feature clear task sequences, purposeful LMS-based assessment, and timely feedback; when platforms are reliable, usable, and supported by rapid help and job-embedded coaching; and when confidence grows through structured mastery experiences and peer modelling. The most promising interventions, therefore, combine contextual, iterative professional development (PD) grounded in TPACK and instructional design, with institutional investment in the reliability and fitness-for-purpose of LMS workflows (content → task → assessment → feedback), including coherent templates, integration, and helpdesk responsiveness. These aligned efforts move LMS use beyond content posting toward meaningful, measurable learning.

At the same time, the evidence base remains thin and heterogeneous. To enable cumulative knowledge and stronger guidance, future studies should report meta-analysis-ready metrics: for associations, correlations with standard errors or confidence intervals; for group comparisons, means and standard deviations or 2×2 counts; alongside clear descriptions of readiness and self-efficacy instruments. Prospective designs, pre-post PD studies, and pragmatic comparisons of PD models, paired with LMS analytics and qualitative inquiry, will clarify mechanisms and effect sizes across contexts, platforms, and education levels. By measuring what changes and sharing reusable artefacts (course templates, rubrics, training materials), researchers and institutions can accelerate learning across sites. In sum, strengthening pedagogy, technology, and beliefs and documenting impacts rigorously, offers the most credible path to sustained gains in teacher readiness for asynchronous LMS-based English instruction.

## REFERENCES

Abbasnejad, B., Soltani, S., & Wong, P. (2024). A systematic review of online learning and teaching strategies during the COVID-19 pandemic: implications for the construction management sector. *Smart and Sustainable Built Environment, 13*(4), 934–959. https://doi.org/10.1108/SASBE-08-2022-0174

Aslan, S. A., Turgut, Y. E., & Aslan, A. (2021). Teachers' views related the middle school curriculum for distance education during the COVID-19 pandemic. *Education and Information Technologies, 26*(6), 7381–7405). Springer. https://doi.org/10.1007/s10639-021-10587-z

Chang, D. F., Huang, Y. L., & Wu, B. (2017). Analyzing the functions and benefits of using mobile facebook as a supplemental LMS in higher education. *Journal of Advanced Computational Intelligence and Intelligent Informatics, 21*(6), 971–979. https://doi.org/10.20965/jaciii.2017.p0971

Dahal, N., & Manandhar, N. K. (2024). The reality of e-Learning: Success and failure of learning management system. *Advances in Mobile Learning Educational Research, 4*(1), 903–910. https://doi.org/10.25082/amler.2024.01.001

Dindar, M., Suorsa, A., Hermes, J., Karppinen, P., & Näykki, P. (2021). Comparing technology acceptance of K-12 teachers with and without prior experience of learning management systems: A Covid-19 pandemic study. *Journal of Computer Assisted Learning, 37*(6), 1553–1565. https://doi.org/10.1111/jcal.12552

Eggleston, A. G., & Citadel, T. (n.d.). *Faculty Development and Instructional Design Through a Quality Matters Tool for Online and Hybrid Course Assessment WIP: Faculty Development and Instructional Design Through a Quality Matters Tool for Online and Hybrid Course Assessment*.

Gleisner Villasmil, L. (2024). The Effects of Influencing Factors on Upper Secondary School Teachers' Use of Digital Learning Resources for Teaching. *Computers and Education Open, 7*, 100210. https://doi.org/10.1016/J.CAEO.2024.100210

Gutierrez, A., Mills, K., Scholes, L., Rowe, L., & Pink, E. (2023). What do secondary teachers think about digital games for learning: Stupid fixation or the future of education? *Teaching and Teacher Education, 133*. https://doi.org/10.1016/j.tate.2023.104278

Kuswoyo, H., Rido, A., & Mandasari, B. (n.d.). *A Systematic Review of Research on EFL Online Learning: Effectiveness, Challenges, Learning Tools, and Suggestions*. www.scopus.com

Martin, B. A. (n.d.). *Teachers Perceptions of Google Classroom: Revealing Urgency for Teacher Professional Learning Perceptions des enseignants sur Google Classroom: révéler l'urgence de l'apprentissage professionnel des enseignants*, *47*(1).

Taşkın, N., & Kandemir, B. (n.d.). *University Student Satisfaction and Behavioural Engagement During Emergency Remote Teaching Satisfaction, 49*(1).

Tukur, A., Mukhtar, U., & Tukur, Aminu. (2024). *Security Issues in Digital Learning Spaces and Preventive Measures (A Case Study of National Open University of Nigeria*. https://www.researchgate.net/publication/384190208

Wannas, A. S., & AbdelMohsen, M. M. (2025). A systematic review of EFL online assessment in higher education: Effectiveness, attitudes, and challenges. *Knowledge Management & E-Learning an International Journal, 435*. https://doi.org/10.34105/j.kmel.2025.17.020