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Global Trends in Language for Specific Purposes Curriculum Development: A Systematic Review

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Abstract
This systematic review investigates how language curriculum design is evolving to address the increasing need for domain-specific communication skills in education and professional practice. It examines the question of how educational systems worldwide adapt curriculum frameworks to meet contextual and disciplinary requirements while maintaining linguistic accuracy and pedagogical quality. The study also highlights the significance of this shift in enhancing equity, relevance, and global competitiveness in language for specific purposes education. Guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol, 24 peer-reviewed articles published between 2021 and 2025 were systematically retrieved from Scopus, Web of Science, and the Education Resources Information Center databases. Thematic synthesis of the selected studies identified three major trends: the contextual localisation of curriculum models and frameworks, the adoption of learner-centred teaching strategies to strengthen skill transfer, and the integration of technology and contextual awareness in curriculum delivery. These findings point to a global movement toward flexible and interdisciplinary approaches in language curriculum development. The review concludes with recommendations for policymakers and educators to align teacher preparation and technological infrastructure with international benchmarks while addressing local learning priorities.
Keywords: Curriculum design, educational technology, language for specific purposes, pedagogical innovation, systematic review, teaching strategies

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Introduction

In today's globalised academic and professional landscape, the need for learners to communicate effectively within domain-specific contexts has become a critical focus in language education (Fitria, 2020; Purwanto & Nurhamidah, 2021). This demand has accelerated the growth of Language for Specific Purposes (LSP) as a major subfield in applied linguistics and language pedagogy. LSP encompasses a range of instructional domains, including English for Specific Purposes (ESP), Arabic for Specific Purposes (ASP) and other tailored language models that address the communicative needs of specialised communities (Enríquez et al., 2023; Kurniawan & Sumani, 2022; Morell, 2020; Reynolds et al., 2023; Rus, 2020). As professional and industrial domains become increasingly complex, the ability to navigate technical discourse in fields such as medicine, engineering, and law reinforces the urgency of developing robust, context-sensitive language curricula. Effective LSP curriculum design must therefore transcend linguistic form and incorporate pragmatic, sociocultural, and institutional factors that shape communication within each discipline (Burston et al., 2017; Cobb & Bower, 2021; Finch, 2023; Katsaounis & Steinmüller, 2021).

Despite this momentum, research on LSP curriculum remains fragmented and inconsistent across educational contexts and regional boundaries. Many studies emphasise localised teaching practices or narrowly scoped innovations without providing a broader curricular perspective that could guide educational policy and instructional coherence (Cha et al., 2019; Meijer & Bekkers, 2015; Oravcová et al., 2022). Instructional methodologies in LSP are diverse, ranging from task-based and genre-informed approaches to corpus-based and content-integrated frameworks, which often leads to conceptual ambiguity and varied pedagogical implementations (Bessadet, 2022; Czeczulin & Greydak, 2020; Freeman, 2017; Kazakova, 2015; Piri & Haxhillazi, 2023). This variability highlights the lack of a unified framework capable of aligning policy goals with effective classroom practice in LSP curriculum development (Cerezo Herrero et al., 2021; Dursun, 2023; Haque, 2019; Tirizite & Marjane, 2023).

This systematic review addresses this gap by consolidating recent international research to inform policymakers, educators, and curriculum developers on strategies for enhancing relevance, equity, and innovation in LSP curriculum design. This includes examining how curriculum models are adapted to different regional and disciplinary contexts, identifying teaching practices that enhance learner outcomes and assessing how technological and contextual factors influence curriculum implementation. These aims were operationalised through the following research questions:

1. How are curriculum models and frameworks adapted to address disciplinary and regional needs in LSP education?
2. What pedagogical strategies and teaching practices enhance learner engagement and skill development in LSP contexts?
3. In what ways do technological and contextual factors influence the design, relevance, and implementation of LSP curricula across educational systems?

Literature Review

Curriculum development in Language for Specific Purposes (LSP) has received increasing attention as language educators respond to the highly specialised communicative demands of academic and professional domains. This aligns with broader educational paradigms that call for curricula addressing not only linguistic competencies but also critical literacies such as sustainability, interdisciplinarity, and digital fluency (Arslan & Curle, 2021; Sanosi et al., 2025). Sanosi et al. (2025) observed that "curricula must

extend beyond language skills to embed future-oriented competencies such as sustainability and digital literacy," and demonstrated how English for Specific Purposes (ESP) syllabi are being reformulated to align with the Sustainable Development Goals (SDGs), signalling a curricular shift towards future-oriented competencies. Similarly, Arslan and Curle (2021) identified the presence of sustainability-related content in Turkish English language textbooks, though implementation remains limited. Recent evidence from Bessadet (2022) further illustrates how innovative pedagogical strategies, such as drama-based teaching, can create more engaging and context-specific learning experiences, which is a priority in LSP curriculum design.

Alongside global agendas, the relevance of learner needs has become central in shaping curriculum design. Generoso and Arbon (2020) reported significant discrepancies between syllabus expectations and students' real-world proficiency in their review of English for Academic Purposes (EAP) curricula in the Philippines. This concern was echoed by Carreira and Kagan (2011), who highlighted the need for community-responsive curricula for heritage language learners in the United States. Haque (2019) emphasised that "learner autonomy is at the heart of effective language curriculum design," reinforcing the importance of equipping students with transferable skills that extend beyond linguistic accuracy, a core consideration in the design of effective LSP curricula. The tension between global curriculum standards and local realities is further exemplified by Zare-ee and Hejazi (2018), who found that internationally produced textbooks consistently outperformed local materials in terms of clarity and cohesion, raising concerns about content alignment and instructional coherence.

Teacher agency has also emerged as a critical dimension in LSP curriculum development. Jurkovič et al. (2023) designed a professional development framework for LSP educators across multiple European contexts, underscoring the need to strengthen teachers' curricular design skills in addition to language proficiency. However, institutional constraints and top-down reforms often hinder such efforts. Lei and Medwell (2020) observed that English teachers in China experienced conceptual ambiguity regarding curriculum reforms, limiting their ability to adapt or innovate in classroom practice. Similarly, Sierra-Piedrahita and Echeverri-Sucerquia (2020) documented how the exclusion of teachers from curriculum planning processes in Colombia weakened implementation and reduced contextual fit.

Technological advancement has further transformed the delivery of LSP curricula, particularly in response to remote learning needs and digital literacy imperatives. Wang (2014) advocated for internet-based tools to enhance student autonomy and encourage constructivist learning environments in tertiary English instruction. These findings can be further contextualised using established technology-integration frameworks. Rogers et al. (2019) in Diffusion of Innovations describe how educators adopt new technologies through a sequence of awareness, interest, evaluation, trial, and adoption. Similarly, Granić (2024) highlights that Levels of Adoption are critical in understanding how individuals integrate technology effectively in different contexts. The Five-Stage Model by Moule (2007) provides a developmental lens for understanding how teachers evolve from familiarisation to innovation when embedding technology in LSP curricula. Rogers et al. (2019) note that "the rate of adoption is highly influenced by perceived value and institutional support," which explains why many institutions struggle to sustain effective digital integration despite widespread availability of resources. The TUFS project in Japan (Kigoshi et al., 2003), which introduced multilingual e-learning modules, exemplifies how digital platforms can scale across linguistic boundaries. Kelly and Hou (2022) further demonstrated how machine translation can empower learners in English-as-an-additional-language contexts, highlighting the potential for such tools to support autonomy and translanguaging practices in LSP education. However, Zucker et al. (2019) cautioned that the scaling of digital interventions often results in uneven outcomes, primarily due to contextual variability and inadequate teacher preparation.

Cultural content and curriculum authenticity also remain central to effective LSP design. Syamsi et al. (2024) reported positive learning outcomes from using a culture-based Indonesian textbook for non-native speakers, suggesting that culturally relevant materials enhance learner engagement and motivation. In Mexico, Balderas et al. (2024) called for more explicit literacy instruction in English and

Spanish within higher education curricula, emphasising the importance of linguistic equity. Yet structural limitations persist. Bardi (2013) criticised the lack of coherence between textbook content and evaluation criteria in curriculum policy, while Koglbauer (2022) noted how prescriptive reforms in the UK marginalised teacher voices in curriculum planning.

Despite the diversity of research on LSP curricula, significant gaps remain. Fragmentation continues to characterise the field, particularly with respect to cross-contextual analysis and the development of transferable curriculum models. While individual studies offer valuable insights, they often remain disconnected, limiting the formation of a coherent knowledge base that can guide policy or practice. This review addresses this gap by synthesising recent international findings to identify dominant trends and propose more inclusive and pedagogically sound approaches to LSP curriculum design. To frame this review, concepts from technology integration theory (Granić, 2024; Rogers et al., 2019) and curricular contextualisation (Jurkovič et al., 2023; Zare-ee & Hejazi, 2018) provide the analytical scaffolding through which studies were synthesised.

Method

This study adopted a Systematic Literature Review (SLR) approach to examine global trends in curriculum development for Arabic language and medical terminology integration. The review process was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) protocol as outlined by Page et al. (2021), ensuring transparency and replicability at each stage. The review was conducted across three major databases: Scopus, WoS and ERIC, selected for their comprehensive indexing of high-quality research in education and language studies. The full screening process is visually presented in the PRISMA flow diagram as Figure One, covering the phases of identification, screening, eligibility and final inclusion.

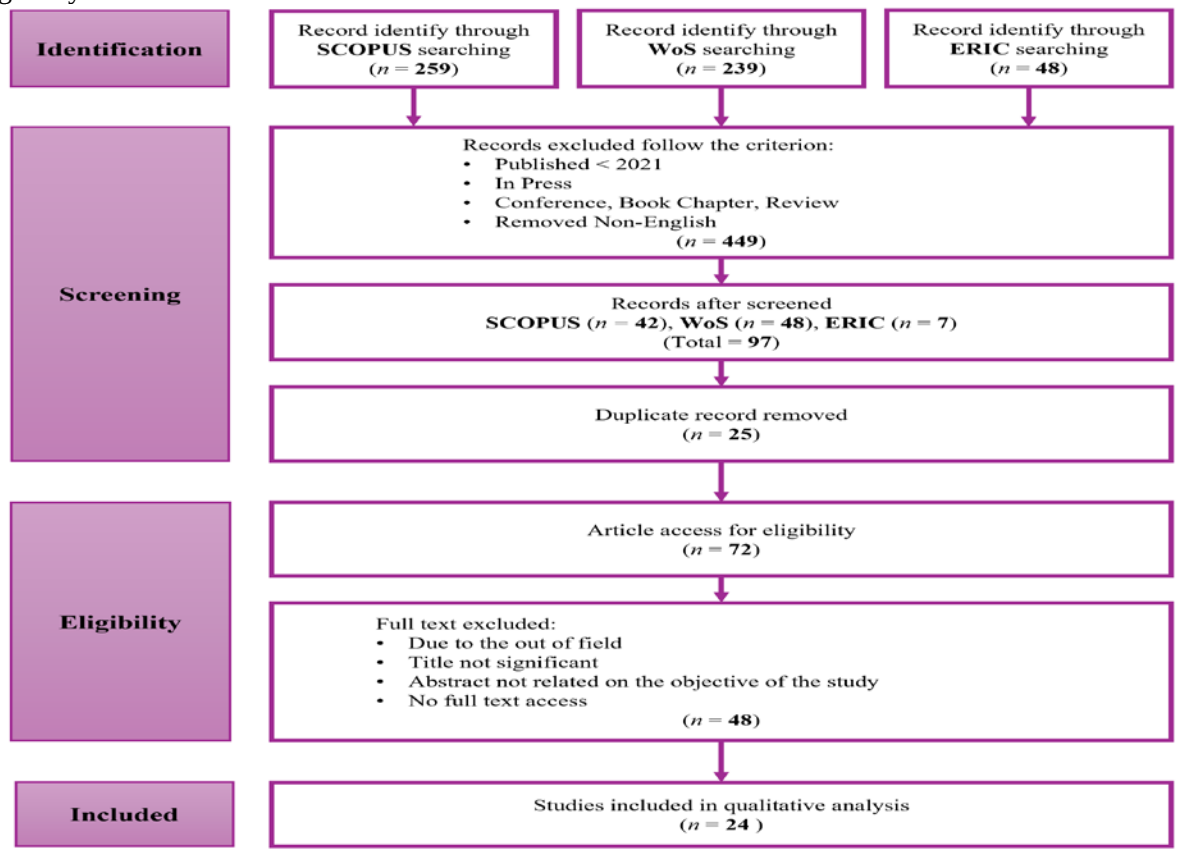


Figure 1. Flow diagram of the proposed searching study

Participants

In the context of this review, the term "participants" refers to the peer-reviewed journal articles that were selected and analysed as primary data sources. A total of 546 articles were initially identified through systematic searches of three reputable databases: Scopus (259), WoS (239) and ERIC (48). Following this, a rigorous screening process was conducted to remove duplicates and exclude irrelevant or low-quality studies. After applying the inclusion and exclusion criteria, only 72 unique articles remained. Further evaluation based on thematic relevance and availability of full text resulted in a final selection of 24 articles for qualitative synthesis. The breakdown of articles by source is presented in Appendix A (Table A1).

Instruments

Several tools and frameworks were employed to ensure systematic and replicable results. First, a structured search string using Boolean operators was developed to retrieve relevant studies from each database. The search terms included combinations of keywords such as "curriculum," "syllabus," "LSP," "ESP," "language," "development," and "trends." Although terms like "TPACK" and "blended learning" are relevant in broader LSP-technology literature, they were excluded in this review to maintain a focused scope on curriculum-specific terminology and frameworks. The exact search strings used for each database are displayed in Table One.

Table 1. *The search string*

DATABASE	SEARCH STRING
SCOPUS	TITLE-ABS-KEY ((curriculum OR syllabus OR textbook OR module) AND develop* AND (language OR lsp OR asp OR esp) AND (purpose* OR goal OR idea) AND trends) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024) OR LIMIT-TO (PUBYEAR , 2025)) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ARTS")) AND (LIMIT-TO (SRCTYPE , "j")) Date of Access: May 2025
WoS	(curriculum OR syllabus OR textbook OR module) AND develop* AND (language OR lsp OR asp OR esp) AND (purpose* OR goal OR idea) AND trends (All Fields) and 2025 or 2024 or 2023 or 2022 or 2021 (Publication Years) and Article (Document Types) and English (Languages) and Education Educational Research or Linguistics (Web of Science Categories) and Education Educational Research or Linguistics (Research Areas) Date of Access: May 2025
ERIC	(curriculum OR syllabus OR textbook OR module) AND develop* AND (language OR lsp OR asp OR esp) AND (purpose* OR goal OR idea) AND trends naepubyearmin:2021 pubyearmax:2025 Date of Access: May 2025

To determine which articles would be included in the final analysis, specific selection criteria were established prior to the screening phase. These criteria were based on publication date, language, document type and thematic relevance. The full set of inclusion and exclusion criteria is outlined in Table Two.

Table 2. *The selection criterion is searching*

CRITERION	INCLUSION	EXCLUSION
Language	English	Non-English
Timeline	2021 – 2025	< 2021
Literature Type	Journal (Article)	Conference, Book, Review
Publication Stage	Final	In Press

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To ensure quality and mitigate methodological bias, each selected study was appraised using a six-criterion framework adapted from Abouzahra et al. (2020). These criteria (QA1–QA6) included: (1) clarity of purpose; (2) relevance and usefulness; (3) methodological transparency; (4) conceptual definition; (5) comparative analysis; and (6) acknowledgement of limitations. A three-point scale was used (3 = strong, 2 = moderate, 1 = weak). In certain cases, partial scores (e.g., 0.5) were assigned when an article demonstrated partial fulfilment of a criterion, such as when comparative insights were mentioned without full empirical grounding.

The scoring rubric was applied independently by two reviewers, followed by reconciliation through discussion. This process served as the study's risk of bias assessment, reducing evaluator subjectivity and increasing inter-rater reliability. The quality scores for each study are provided in Appendix B (Table B1) and only a summary reference is made in the main text.

Procedures

The procedures followed in this review comprised four main phases as outlined by the PRISMA protocol: identification, screening, eligibility assessment and final inclusion. During the identification stage, database-specific search queries were executed using the pre-established search strings. The date of access for all searches was May 2025. During the screening phase, duplicate articles were removed, and titles and abstracts were reviewed to eliminate studies that did not meet the basic inclusion criteria. In the eligibility phase, full-text articles were retrieved and examined in detail to assess their direct relevance to LSP curriculum development. Articles that lacked empirical or theoretical significance or were inaccessible in full text were excluded. The final phase involved extracting key information from the 24 included studies and organising their findings into emergent thematic categories. These themes subsequently structured the analytical framework for the results and discussion sections of the paper.

Result

This review analysed 24 peer-reviewed articles published between 2021 and 2025 that addressed curriculum development in LSP. The thematic synthesis identified three core domains across the selected studies: (1) curriculum models and LSP frameworks; (2) teaching practices and pedagogical strategies in LSP; and (3) technological and contextual adaptations of LSP curricula. The distribution of studies under each theme is provided in Appendix C (Table C1).

Curriculum Models and LSP Frameworks

Efforts to develop effective LSP curricula consistently highlighted the need to adapt global models to local linguistic, disciplinary and cultural contexts. In Japan, the revised national Model Core Curriculum underscored a competency-based approach rooted in local educational values requiring interpretive reconstruction of global terminology (Urushibara-Miyachi et al., 2024). In South Africa, van Rooyen et al. (2024) examined the integration of multilingual skills into medical education revealing student concerns about the cultural relevance of isiXhosa instruction and underscoring the importance of curricular responsiveness. Similarly, Valle Coto et al. (2024) showed that early and inclusive equity-based instruction significantly improved students' language awareness and application in pre-clinical settings.

Technological integration within curriculum design appeared across several studies. Hegrenæs et al. (2022) redesigned a legal translation course in Norway using translation competence theory signalling a shift toward outcome-based education. In China, interpreting

programs analysed through the GETAMEL model revealed how tablet-based notetaking adoption hinged on instructor readiness suggesting the need for formalised digital literacy components in curriculum (Tian & Wang, 2024). Tyron et al. (2021) applied psycho-pedagogical principles in a modular course for ship engineers aligning technical literacy with cognitive development and industrial demands.

The alignment of professional expectations with LSP curricular frameworks was further demonstrated by Hegrenæs et al. (2022) whose postgraduate legal translation modules fostered critical thinking and accuracy through authentic tasks. A recurring challenge, however, involved aligning theoretical goals with classroom practice. Namanyane and Shaoan (2025) showed how teachers in China adapted their pedagogical content knowledge to implement communicative approaches within the ELCS. Valle Coto et al. (2024) similarly reported that equity-focused interventions enhanced learner preparedness for multilingual settings. Namanyane and Shaoan (2025) offered additional evidence from China showing that despite policy support, teachers faced difficulties executing role-play activities effectively due to a mismatch between curriculum expectations and classroom realities.

In summary, three major directions emerged: (1) localisation of global curriculum models through cultural and linguistic contextualisation, (2) integration of technological tools to support instructional outcomes and (3) alignment between educator competence and curricular innovation.

Teaching Practices and Pedagogical Strategies in LSP

Pedagogical strategies in LSP are evolving rapidly with the rise of digital technologies and artificial intelligence prompting a shift toward more learner-responsive designs. In China, EFL students' difficulties in blended learning revealed limitations in learner autonomy, engagement and instructional coherence (Cao et al., 2024). Complementing this, Meniado (2023) highlighted ChatGPT's potential in personalising writing instruction though concerns over ethical risks and dependency remained. Similarly, F. F. Wang et al. (2025) found that interactive AI scaffolding could boost motivation and self-regulation when instruction matched learner developmental needs.

Digital pedagogies are also redefining teacher competencies in LSP. Meniado (2023) introduced Digital Language Teaching 5.0 aligning with Industry 5.0's focus on adaptive technologies and human-centred innovation. Huynh and Nguyen (2021) reported that Vietnamese teachers responded positively to CALL training but often struggled to apply it effectively indicating gaps in institutional support. Medvedeva et al. (2022) added to this discourse by proposing a system to monitor soft skills development showing how LSP teaching is expanding to integrate transversal competencies like leadership and teamwork.

Teacher readiness remains a crucial factor in LSP delivery. Huynh and Nguyen (2021) found that although in-service educators felt confident using technology, structured training remained scarce. This highlighted the value of targeted professional development to build instructional confidence and curriculum alignment.

Contextualised strategies also play a vital role in enhancing language performance and professional identity. In legal education, Chovancová (2024) demonstrated how mediation tasks supported linguistic negotiation through role-play. Likewise, Savula et al. (2024) documented the benefits of CLIL, flipped classrooms and virtual simulations in improving cognitive engagement and specialised communication. Beyond technology, motivation and learner diversity emerged as key themes. Zhou et al. (2023) showed that EMI learners with lower language proficiency often compensated through metacognitive preparation indicating motivation was more predictive of

success than proficiency alone. Porto et al. (2021) similarly revealed tensions between national policy and classroom realities in Argentina reinforcing the importance of differentiated instruction and curriculum decentralisation.

In summary, LSP pedagogy is shifting toward integration of AI, learner-centred tasks and digital literacy while challenges persist in teacher preparation, ethical usage and contextual curriculum adaptation.

Technological and Contextual Adaptation in LSP Curriculum

This theme highlights the intersection between technological advancement and local context in shaping LSP curriculum design. In Chile, a Business English course was developed based on needs analysis revealing student preferences for smaller groups, interactive delivery and globally relevant content (Lasekan et al., 2023). Similarly, Shen and Lu (2024) introduced a multimedia animation-based platform for mechanical drawing in China which improved learners' conceptual clarity and engagement in technical subjects. In Taiwan, Chung and Chen (2021) applied text mining to identify competency demands in the HR industry enabling curriculum designers to align course content with labour market expectations. These studies support the idea that technology in LSP should be both pedagogically grounded and market responsive. However, the successful implementation of such innovations often depends on systemic factors such as institutional leadership, availability of digital infrastructure and administrative willingness to support curricular change.

Contextual adaptation was also crucial in community-based and inclusive learning contexts. Diller and Fraiser (2022) documented how mother tongue preservation among the Prai community in Thailand flourished when integrated into locally designed curricula. In Kenya, Adhiambo et al. (2025) illustrated how visual symbol strategies enhanced expressive communication for hearing-impaired learners demonstrating how curriculum can meet diverse learner needs. Similarly, Moscovici et al. (2022) found that biomedical engineering students in Argentina perceived higher motivation and identity development when engaging in Wikipedia writing tasks in local languages suggesting the power of public-facing curriculum activities. Yet, these practices also rely on systemic enablers including school policies that recognise diversity, support from programme coordinators and allocation of time and space for alternative instructional models. Without institutional backing, innovative efforts risk becoming isolated practices rather than scalable solutions.

The social and emotional dimensions of curriculum design were emphasised in multiple studies. For instance, Perlado Lomo de Espinosa and Trujillo Vargas (2024) highlighted that assertive communication training could serve as a preventive measure against student violence while enhancing critical thinking. Their empirical findings further demonstrated that embedding social communication skills within the curriculum helped address behavioural challenges in educational settings. Complementary perspectives were offered by Adhiambo et al. (2025) and Diller with Fraiser (2022) who illustrated how inclusive and culturally grounded practices can reshape learners' perceptions of literacy and empower local knowledge systems. Collectively, these findings suggest that while technological and contextual strategies are promising, their long-term impact is contingent on addressing systemic barriers such as policy inertia, underfunding and inconsistent leadership engagement.

In summary, these studies affirm that LSP curriculum must embrace both technological innovation and contextual responsiveness. A multidimensional approach that incorporates

leadership support, resource accessibility, multimedia integration, community-based learning, emotional intelligence and real-world alignment enables LSP instruction to be more inclusive, relevant and future-ready.

Discussion

This review set out to examine three core areas: the frameworks guiding LSP curriculum design (RQ1), the pedagogical practices employed (RQ2) and the role of technology and context in shaping curriculum development (RQ3). The findings revealed that curriculum models are increasingly contextualised to disciplinary and cultural needs; pedagogical strategies are shifting towards learner-responsive, technology-enhanced methods; and curricular innovations are deeply influenced by both institutional leadership and sociocultural realities. These insights provide a multi-layered understanding of current LSP practices and inform the discussion that follows.

This systematic review synthesised 24 peer-reviewed studies to offer a global overview of recent developments in LSP curriculum design. The thematic analysis revealed three prominent and interconnected domains: (1) Curriculum Models and LSP Frameworks, (2) Teaching Practices and Pedagogical Strategies and (3) Technological and Contextual Adaptation. These themes collectively reflect the evolving demands placed on curriculum designers, educators and institutions to ensure relevance, inclusivity and innovation in LSP education.

Findings under the first theme highlight a global shift toward contextualising curriculum frameworks to fit specific disciplinary, linguistic and regional needs. For example, the Japanese Model Core Curriculum restructured medical education by integrating locally informed competencies while aligning with international standards (Urushibara-Miyachi et al., 2024). In South Africa, language offerings such as isiXhosa were integrated into undergraduate medical training, yet student feedback revealed limitations in cultural and pedagogical relevance (Rooyen et al., 2024). This underlines the need for curricular adaptation that not only reflects societal needs but also accommodates learner expectations. Similarly, the work of Valle Coto et al. (2024) in integrating equity-focused instruction into pre-clinical education demonstrated measurable gains in language awareness affirming the value of inclusive and structured curriculum design.

The second theme illustrated a growing pedagogical transition toward learner-centred practices facilitated by digital technologies and personalised instruction. Studies on artificial intelligence-based tools such as ChatGPT (Asad et al., 2024) and interactive scaffolding systems (Wang et al., 2025) revealed increased learner motivation and self-regulation when instructional design was aligned with student needs. However, findings from Huynh and Nguyen (2021) indicated that while in-service teachers expressed openness toward Computer-Assisted Language Learning (CALL), a lack of structured professional development hindered classroom application. These challenges reflect limited application of the Technological Pedagogical Content Knowledge (TPACK) framework, which emphasises the intersection of content expertise, pedagogical skills and technological fluency. Without comprehensive TPACK training, teacher integration of digital tools remains superficial and inconsistent. Medvedeva et al. (2022) expanded on this by introducing digital tracking of soft skills suggesting a broader shift in LSP pedagogy toward transversal competencies such as teamwork and leadership. Meniado (2023) advocated for Digital Language Teaching 5.0 rooted in Industry 5.0 which calls for adaptive and human-centred technology integration in teacher preparation. However, as with Huynh and Nguyen, Meniado's findings also point to the absence of systemic enablers, particularly school leadership and institutional planning, as critical barriers to implementation. Leadership support, especially from

principals and programme coordinators, is central to facilitating teacher readiness and sustaining innovation in LSP instruction.

The third theme explored how LSP curricula respond to contextual variables especially in marginalised or diverse learning environments. Adhiambo et al. (2025) demonstrated that symbol-based instruction enhanced communication in students with hearing impairments. In Thailand, Diller and Fraiser (2022) found that curriculum grounded in local language and identity supported minority literacy development. Moscovici et al. (2022) observed that task-based assignments such as Wikipedia editing in biomedical contexts, improved learner self-efficacy and academic motivation. In a broader socio-emotional context, Perlado Lomo de Espinosa and Trujillo Vargas (2024) argued for embedding assertive communication into curriculum as a preventive mechanism against student violence as further elaborated in their own empirical findings. Despite policy endorsement for learner-centred models in China, educators faced barriers translating those policies into practice due to systemic constraints (Namanyane & Shaoan, 2025). This tension reinforces the need for decentralised planning and institutional flexibility. These findings mirror earlier research that situates LSP reform within a broader ecosystem of governance, school culture and administrative responsiveness. Without institutional frameworks that promote equity, resource access and curricular freedom, contextually driven innovations remain fragmented and unsustainable.

These findings collectively reveal that the three themes are interconnected and form a cohesive response to modern curricular challenges in LSP. The emphasis on curriculum localisation demonstrates that meaningful instruction is grounded in disciplinary logic, institutional identity and learner reality (Urushibara-Miyachi et al., 2024; Valle Coto et al., 2024). Similarly, the widespread use of digital platforms and learner-responsive methods underscores the growing necessity for flexible instructional environments (Medvedeva et al., 2022; F. F. Wang et al., 2025). Contextual sensitivity is not merely a pedagogical advantage but a core component of equity and social impact in curriculum design (Adhiambo et al., 2025; Diller & Fraiser, 2022). Additionally, as shown in Porto et al. (2021), decentralisation was essential for empowering teachers to meet learner diversity across different systems. The present review thus aligns with and extends previous research by highlighting the systemic and institutional prerequisites, such as leadership engagement, infrastructure provision and interdepartmental collaboration, that shape the success of curriculum innovation in LSP settings.

The implications of this review are threefold. First, curriculum development should be informed by interdisciplinary collaboration, involving language specialists, content experts, and local stakeholders. Second, teacher education programmes must include digital fluency, critical pedagogy, and adaptive design to prepare educators for changing learning environments. Third, educational policies should promote equitable access to instructional technologies, particularly those proven to support marginalised learners such as tablet-supported notetaking (Tian & Wang, 2024) and animation-enhanced instruction (Shen & Lu, 2024). Beyond access, the sustainability of these innovations depends on school leadership buy-in, institutional incentives, and supportive monitoring mechanisms. Continuous curriculum evaluation, informed by learner feedback and performance data, remains essential to ensure pedagogical relevance and long-term sustainability.

Nevertheless, several limitations should be acknowledged. The review was limited to English-language sources from Scopus, WoS, and ERIC, potentially excluding valuable non-English or region-specific perspectives. Additionally, the synthesis was based primarily on abstract-level content, which may not fully reflect methodological intricacies or empirical richness.

Furthermore, limited benchmarking across contexts (QA5) suggests a need for comparative frameworks that situate findings within broader global trends. Future research should focus on longitudinal studies exploring LSP curriculum reform, especially those integrating artificial intelligence, multilingual education, and inclusive teaching practices. Greater scholarly attention is also needed in underrepresented regions such as Sub-Saharan Africa, Central Asia, and the Middle East to ensure a more balanced and equitable understanding of global LSP curriculum trajectories.

Conclusion

This systematic review aimed to examine how Arabic LSP curricula can be designed to meet institutional priorities, learner diversity, and evolving educational demands, particularly in scientific and medical contexts. The review responds to curricular fragmentation by emphasising the need for coherent, context-aware design grounded in cultural, disciplinary, and technological relevance.

Insights emerging from this review provide a nuanced understanding of how LSP curricula can be restructured to meet evolving institutional, and learner demands. Rather than prescribing one-size-fits-all models, the review underscores the necessity of integrating cultural, disciplinary, and technological considerations into curriculum planning. These conclusions highlight the importance of context-aware approaches that align pedagogical practice with the evolving demands of learners and institutions.

To translate these insights into action, curriculum developers should begin with clear stakeholder mapping that includes not only educators and content experts but also school leaders, ICT teams and policy advisors. Interdisciplinary collaboration must be guided by needs assessments and structured implementation plans. Policymakers must prioritise targeted funding for teacher training programmes that integrate TPACK principles and ensure that professional development initiatives are supported by school leadership to improve uptake and sustainability. Investment in equitable technology infrastructure should also be aligned with pedagogical goals and include provisions for underserved communities.

This review also paves the way for future research. Longitudinal investigations are needed to examine the sustained effects of AI integration, multilingual practices, and socio-emotional skill training within LSP curricula. Researchers should also expand their scope to include underrepresented geographical regions and non-English language scholarship. Such expansion would enhance the global LSP discourse through more balanced, inclusive, and evidence-based curriculum innovation.

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APPENDIX A. Number and Details of Primary Studies Database

Table A1. ***Number and details of primary studies database***

No.	AUTHOR	TITLE	YEAR	JOURNAL	SCOPUS	WoS	ERIC
1.	Chovancová B.	Training Legal Skills in the ESP Classroom: Mediation Activities and Student Self-Reflection	2024	Hermes (Denmark)	/		
2.	Valle Coto M.G.; Iñiguez R.X.; Lentskevich M.A.; Ally S.A.; Farfan J.F.; Park Y.S.; Gangopadhyaya A.G.; Ortega P.	Teaching Foundational Language Equity Concepts in The Pre-Clinical Curriculum	2024	BMC Medical Education	/	/	
3.	Urushibara-Miyachi Y.; Matsushita K.; Nishigori H.	Development of a Competency-Based National Model Core Curriculum in Japan: A Case Study	2024	Medical Teacher	/		
4.	Van Rooyen I.; Claassen J.; Moodaley N.; Doyle G.; Skade T.; Nash R.; Gxilishe S.; Hellenberg D.A.	Multilingual Education: Medical Interns Perceptions Regarding the Usefulness of Non-Mother Tongue Communications Skills Taught During the Undergraduate Curriculum	2024	BMC Medical Education	/	/	
5.	Tyron O.; Korieshkova S.; Didenko M.; Kaminska S.	Psycho-Pedagogical Approaches to the Design of English Learning Course for Ship Engineers	2021	International Journal of Engineering Pedagogy	/		
6.	Perlado Lomo de Espinosa I.; Trujillo Vargas J.J.	Research Analysis on Social Communicative Skills as a Tool to Prevent Violence in the Educational Context	2024	Revista Latina de Comunicacion Social	/		
7.	Medvedeva O.D.; Rubtsova A.V.; Vilkova A.V.; Ischenko V.V.	Digital Monitoring of Students' Soft Skills Development as an Interactive Method of Foreign Language Learning	2022	Education Sciences	/	/	
8.	Savula A.; Mylyk O.; Skiba N.; Podoliak M.; Dzyubynska K.	Effective Methods of Teaching a Foreign Language in the Modern Educational Environment	2024	Scientific Herald of Uzhhorod University. Series Physics	/		
9.	Lasekan O.A.; Moraga-Pumarino A.F.; Pachava V.	Using Needs Analysis to Foster Sustainability of Business English Courses: A Case Study of a University in the South of Chile	2023	Sustainability (Switzerland)	/		
10.	Diller F.J.; Fraiser D.M.	Dear New Reader: Factors Affecting Interest in Reading Prai	2022	Journal of Mekong Societies	/		

No.	AUTHOR	TITLE	YEAR	JOURNAL	SCOPUS	WoS	ERIC
11.	Meniado J.C.	Digital Language Teaching 5.0: Technologies, Trends and Competencies	2023	RELC Journal	/	/	/
12.	Cao Y.; Jeyaraj J.J.; Razali A.B.	Attitudes and Perceptions of English as a Foreign Language Students on Blended Learning and Learner Autonomy in a Private University of China	2024	International Journal of Learning, Teaching and Educational Research	/		
13.	Tian Y.; Wang Y.	Understanding Instructors' Tablet Adoption for Note-Taking in Interpreting: Insights from the GETAMEL Model	2024	Frontiers in Education	/	/	
14.	Shen Y.; Lu W.	Technology of Animation in Multimedia Courseware of Mechanical Drawing	2024	International Journal of Electrical Engineering and Education	/		
15.	Adhiambo O.E.; Sharon O.; Alfred O.	Leveraging Symbolic Systems to Foster Expressive Communication in Students with Hearing Impairments	2025	Social Sciences and Humanities Open	/		
16.	Moscovici, Khen; Ben Arie, Gal; Shelef, Ilan; Kalet, Adina	Creating Wikipedia Articles on Health and Technology Topics Can Empower the Writers and Benefit the Community	2022	BMC Medical Education		/	
17.	Zhou, Sihan; Fung, Daniel; Thomas, Nathan	Towards Deeper Learning in EMI Lectures: The Role of English Proficiency and Motivation in Students' Deep Processing of Content Knowledge	2023	Journal of Multilingual and Multicultural Development		/	
18.	Hegrenaes, Claudia Forster; Roald, Jan; Sandvei, Beate; Simonnaes, Ingrid	Teaching Specialized Translation: Curriculum Design of An Online Master Course in Legal Translation	2022	Current Trends in Translation Teaching and Learning E		/	
19.	Thu-Nguyet Huynh; Uyen Nu Thuy Nguyen	In-Service Language Teachers' Attitudes Towards Technology Use and the Development of Their Perceived Call Competencies	2021	Taiwan Journal of Tesol		/	
20.	Porto, Melina; Lopez-Barrios, Mario; Banegas, Dario Luis	Research on English Language Teaching and Learning in Argentina (2014-2018)	2021	Language Teaching		/	

No.	AUTHOR	TITLE	YEAR	JOURNAL	SCOPUS	WoS	ERIC
21.	Namanyane, Tebatso; Shaoan, Md Mirajur Rhaman	English Teachers' Pedagogical Content Knowledge in the Implementation of Learner-Centered Role-Play: A Case Study of Curriculum and Policy Reforms in China	2025	Cogent Education		/	
22.	Wang, Feifei; Zhou, Xiaohua; Li, Kangxin; Cheung, Alan C. K.; Tian, Ming	The Effects of Artificial Intelligence-Based Interactive Scaffolding on Secondary Students' Speaking Performance, Goal Setting, Self-Evaluation, And Motivation in Informal Digital Learning of English	2025	Interactive Learning Environments		/	
23.	Chung, C.-H., & Chen, Lu-Jia	Text Mining for Human Resources Competencies: Taiwan Example	2021	European Journal of Training and Development			/
24.	Asad, M. M., Shahzad, S., Shah, S. H. A., Sherwani, F., & Almusharraf, N. M.	ChatGPT as Artificial Intelligence-Based Generative Multimedia for English Writing Pedagogy: Challenges and Opportunities from an Educator's Perspective	2024	International Journal of Information and Learning Technology			/

APPENDIX B. Quality Assessment of Selected Studies Based on Systematic Review Criteria (QA1–QA6)

Table B1. ***Quality assessment of selected studies based on systematic review criteria (QA1–QA6)***

PRIMARY STUDY	TITLE	QA1	QA2	QA3	QA4	QA5	QA6	TOTAL MARK	PERCENTAGE (%)
PS1	Training Legal Skills in the ESP Classroom: Mediation Activities and Student Self-Reflection	1	1	1	1	0.5	0.5	5	83.33
PS2	Teaching Foundational Language Equity Concepts in the Pre-Clinical Curriculum	1	1	1	1	0.5	0.5	5	83.33
PS3	Development of a Competency-Based National Model Core Curriculum in Japan: A Case Study	1	1	1	1	1	1	6	100.00
PS4	Multilingual Education: Medical Interns Perceptions Regarding the Usefulness of Non-Mother Tongue Communications Skills Taught During the Undergraduate Curriculum	1	1	1	1	1	1	6	100.00
PS5	Psycho-Pedagogical Approaches to the Design of English Learning Course for Ship Engineers	1	1	1	1	1	0.5	5.5	91.67
PS6	Research Analysis on Social Communicative Skills as a Tool to Prevent Violence in the Educational Context	1	1	1	1	1	0.5	5.5	91.67
PS7	Digital Monitoring of Students' Soft Skills Development as an Interactive Method of Foreign Language Learning	1	1	1	1	0.5	0.5	5	83.33

PRIMARY STUDY	TITLE	QA1	QA2	QA3	QA4	QA5	QA6	TOTAL MARK	PERCENTAGE (%)
PS8	Effective Methods of Teaching a Foreign Language in The Modern Educational Environment	1	1	1	1	1	1	6	100.00
PS9	Using Needs Analysis to Foster Sustainability of Business English Courses: A Case Study of a University in the South of Chile	1	1	1	1	0.5	0.5	5	83.33
PS10	Dear New Reader: Factors Affecting Interest in Reading Prai	1	1	1	1	1	0.5	5.5	91.67
PS11	Digital Language Teaching 5.0: Technologies, Trends and Competencies	1	1	1	1	1	1	6	100.00
PS12	Attitudes and Perceptions of English as a Foreign Language Students on Blended Learning and Learner Autonomy in a Private University of China	1	1	1	1	0.5	0.5	5	83.33
PS13	Understanding Instructors' Tablet Adoption for Note-Taking in Interpreting: Insights from The GETAMEL Model	1	1	1	1	0.5	1	5.5	91.67
PS14	Technology of Animation in Multimedia Courseware of Mechanical Drawing	1	1	1	1	1	0.5	5.5	91.67
PS15	Leveraging Symbolic Systems to Foster Expressive Communication in Students with Hearing Impairments	1	1	1	1	0.5	0.5	5	83.33
PS16	Creating Wikipedia Articles on Health and Technology Topics Can Empower the Writers and Benefit the Community	1	1	1	1	1	0.5	5.5	91.67
PS17	Towards Deeper Learning in EMI Lectures: The Role of English Proficiency and Motivation in Students' Deep Processing of Content Knowledge	1	1	1	1	1	1	6	100.00
PS18	Teaching Specialized Translation: Curriculum Design of an Online Master Course in Legal Translation	1	1	1	1	0.5	0.5	5	83.33
PS19	In-Service Language Teachers' Attitudes Towards Technology Use and the Development of Their Perceived Call Competencies	1	1	1	1	1	0.5	5.5	91.67
PS20	Research on English Language Teaching and Learning in Argentina (2014-2018)	1	1	1	1	1	0.5	5.5	91.67
PS21	English Teachers' Pedagogical Content Knowledge in the Implementation of Learner-Centered Role-Play: A Case Study of Curriculum and Policy Reforms in China	1	1	1	1	0.5	1	5.5	91.67
PS22	The Effects of Artificial Intelligence-Based Interactive Scaffolding on Secondary Students' Speaking Performance, Goal Setting, Self-Evaluation, and Motivation in Informal Digital Learning of English	1	1	1	1	1	0.5	5.5	91.67
PS23	Text Mining for Human Resources Competencies: Taiwan Example	1	1	1	1	0.5	0.5	5	83.33

PRIMARY STUDY	TITLE	QA1	QA2	QA3	QA4	QA5	QA6	TOTAL MARK	PERCENTAGE (%)
PS24	ChatGPT as Artificial Intelligence-Based Generative Multimedia for English Writing Pedagogy: Challenges and Opportunities from an Educator's Perspective	1	1	1	1	1	0.5	5.5	91.67

APPENDIX C. Thematic Classification of Studies in LSP Curriculum Development

Table C1. ***Thematic classification of studies in LSP curriculum development***

THEME	PS CODE	TITLE
Curriculum Models and LSP Frameworks	PS2	Teaching Foundational Language Equity Concepts in the Pre-Clinical Curriculum (Valle Coto et al., 2024)
	PS3	Development of a Competency-Based National Model Core Curriculum in Japan: A Case Study (Urushibara-Miyachi et al., 2024)
	PS4	Multilingual Education: Medical Interns Perceptions Regarding the Usefulness of Non-Mother Tongue Communications Skills Taught During the Undergraduate Curriculum (Rooyen et al., 2024)
	PS5	Psycho-Pedagogical Approaches to the Design of English Learning Course for Ship Engineers (Tyron et al., 2021)
	PS13	Understanding Instructors' Tablet Adoption for Note-Taking in Interpreting: Insights from the GETAMEL Model (Tian & Wang, 2024)
	PS18	Teaching Specialized Translation: Curriculum Design of an Online Master Course in Legal Translation (Hegrenæs et al., 2022)
	PS21	English Teachers' Pedagogical Content Knowledge in Role-Play Implementation of Learner-Centered Role-Play: A Case Study of Curriculum and Policy Reforms in China (Namanyane & Shaoan, 2025)
Teaching Practices and Pedagogical Strategies in LSP	PS1	Training Legal Skills in the ESP Classroom: Mediation Activities and Student Self-Reflection (Chovancová, 2024)
	PS7	Digital Monitoring of Students' Soft Skills Development as an Interactive Method of Foreign Language Learning (Medvedeva et al., 2022)
	PS8	Effective methods of teaching a foreign language in the modern educational environment (Savula et al., 2024)
	PS11	Digital Language Teaching 5.0: Technologies, Trends and Competencies (Meniado, 2023)
	PS12	Attitudes and Perceptions of English as a Foreign Language Students on Blended Learning and Learner Autonomy in a Private University of China (Cao et al., 2024)
	PS17	Towards Deeper Learning in EMI Lectures: The Role of English Proficiency and Motivation in Students' Deep Processing of Content Knowledge (Zhou et al., 2023)
	PS19	In-Service Language Teachers' Attitudes Towards Technology Use and the Development of Their Perceived Call Competencies (Huynh & Nguyen, 2021)
	PS20	Research on English Language Teaching and Learning in Argentina (2014-2018) (Porto et al., 2021)
	PS22	The Effects of Artificial Intelligence-Based Interactive Scaffolding on Secondary Students' Speaking Performance, Goal Setting, Self-Evaluation, and Motivation in Informal Digital Learning of English (F. F. Wang et al., 2025)

THEME	PS CODE	TITLE
	PS24	ChatGPT as Artificial Intelligence-Based Generative Multimedia for English Writing Pedagogy: Challenges and Opportunities from an Educator's Perspective (Asad et al., 2024)
Technological and Contextual Adaptation in LSP Curriculum	PS6	Research Analysis on Social Communicative Skills to Prevent Violence in the Educational Context (Perlado Lomo de Espinosa & Trujillo Vargas, 2024)
	PS9	Using Needs Analysis to Foster Sustainability of Business English Courses: A Case Study of a University in the South of Chile (Lasekan et al., 2023)
	PS10	Dear New Reader: Factors Affecting Interest in Reading Prai (Diller & Fraiser, 2022)
	PS14	Technology of Animation in Multimedia Courseware of Mechanical Drawing (Shen & Lu, 2024)
	PS15	Leveraging Symbolic Systems to Foster Expressive Communication in Students with Hearing Impairments (Adhiambo et al., 2025)
	PS16	Creating Wikipedia Articles on Health and Technology Topics Can Empower the Writers and Benefit the Community (Moscovici et al., 2022)
	PS23	Text Mining for Human Resources Competencies: Taiwan Example (Chung & Chen, 2021)