EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

INFORMATION TECHNOLOGY–ENHANCED TERMINOLOGY INSTRUCTION

Nishanova Khafiza
Teacher, Uzbekistan State World Languages University

Abstract
Mastering specialised vocabulary is a central hurdle for learners in English-medium tourism programmes. Synthesising empirical studies published between 2015 and 2025, this review investigates how information technologies enhance the teaching and learning of tourism terminology. It maps the digital tools most frequently researched – mobile apps, augmented and virtual reality environments, multimodal corpora, and adaptive learning platforms – and analyses their pedagogical affordances for noticing, retention, and communicative transfer. A thematic comparison across 36 studies reveals three dominant implementation models: blended classroom integration, fully online self-access modules, and immersive task-based simulations. Outcome measures consistently show medium-to-large vocabulary gains, with virtual reality producing the highest effect sizes owing to contextual authenticity. Nonetheless, evidence for long-term retention and productive use remains limited. The review concludes by outlining research gaps – particularly in longitudinal designs and teacher professional development – and proposes an agenda for leveraging data analytics to personalise tourism vocabulary instruction in varied contexts across formal and informal settings.

Keywords: Tourism terminology; vocabulary instruction; information technology; mobile learning; virtual reality; multimodal corpora; task-based learning.

Introduction

Preparing graduates for the hyper-global tourism marketplace means equipping them with a highly specialised lexicon that differs sharply from general-purpose English. Corpus research confirms that tourism discourse is densely packed with domain-specific collocations (e.g., *heritage trail*, *airport transfer*) and pragmatic routines such as service encounters, apology formulas, and up-selling moves (Wahyuningsih & Mahsar, 2024). Yet many syllabi still rely on generic word lists,

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

limiting learners' ability to perform nuanced communicative tasks – handling complaints at a front desk, narrating destination histories, or guiding eco-tours. The move toward English for Specific Purposes (ESP) therefore demands pedagogies that elevate terminological precision without sacrificing communicative authenticity.

The lexical-interactional challenge

Unlike discrete grammar points, specialised vocabulary must be *activated* in realistic interactions. Kacetl and Klimova's corpus work shows that even seemingly concrete nouns such as *pass* or *season* index multiple tourism-specific senses that only emerge in situational contexts (2015). The lexical approach (Lewis, 1993) and usage-based theories of second-language acquisition underscore the importance of frequency-rich, context-embedded exposure. However, paper-based materials struggle to recreate the situated, multimodal input required for robust form–meaning mapping. This pedagogical gap explains the growing interest in information-technology solutions that can deliver high-density, contextually filtered input on demand.

Mobile Assisted Language Learning research demonstrates clear links between spaced repetition, push-notification prompts, and accelerated lexical uptake (Polakova & Klimova, 2022). Parra, Reinozo and Granda (2024) further show that YouTube-integrated vocabulary apps allow learners to mine authentic travel vlogs and annotate industry slang, leading to statistically significant receptive-vocabulary gains and favourable usability ratings. These studies align with cognitive-psychology findings on retrieval practice and dual-coding, suggesting that multimedia micro-learning can offset the sparsity of classroom contact hours. Yet, critics note that mobile flashcards isolate items from pragmatic contexts, raising questions about transferability to spoken interaction – a concern particularly acute in tourism where memory demands and performance pressure coincide.

Virtual-reality (VR) and augmented-reality (AR) platforms attempt to solve the context problem by embedding learners inside visually and acoustically rich scenarios. Lin et al. (2023) documented medium-to-large effect sizes for vocabulary retention after scenery-based VR tours in which dyads staged hotel-check-in dialogues and itinerary briefings. Complementary qualitative work in hospitality programmes reports that students value the *felt* authenticity and safe

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

rehearsal space provided by VR role-play (Pramasta & Wibowo, 2023). Neuro-physiological data collected by Hsu (2024) indicate that cognitive absorption – measured via EEG and self-report – mediates the link between sense of immersion and post-test vocabulary scores, lending theoretical weight to flow-theory explanations of VR efficacy. On the AR side, Khan et al. (2023) leveraged smartphone overlays to superimpose word cards onto real-world artefacts, obtaining durable gains after delayed post-tests and positive motivational shifts. Although these studies confirm clear short-term benefits, systematic reviews still flag the absence of longitudinal follow-ups and the need for teacher training to integrate immersive tasks into blended curricula (Pratisto, Thompson, & Potdar, 2022).

Beyond immersive experiences, web-based multimodal corpora such as Sketch Engine facilitate *data-driven learning* approaches, enabling students to mine authentic brochure, review, and transcript corpora for high-salience collocations. Wahyuningsih and Mahsar's (2024) tourism wordlist was itself validated through pre-/post-tests in vocational colleges, confirming corpus-informed lists as more predictive of communicative need than textbook glossaries. When paired with adaptive learning dashboards, these corpora can generate personalised spaced-repetition schedules, a feature increasingly embedded in commercial apps. Early prototypes show promise: Akmal and Nurjanah's (2024) AR flashcards dynamically adjusted repetition intervals based on error rates, reducing forgetting curves in elementary cohorts by 26 %.

Taken together, the literature suggests that no single technology is a panacea. Mobile apps excel at breadth and micro-learning efficiency, whereas VR/AR provide depth through embodied, situated rehearsal. Corpus tools supply empirical lexical targets and foster learner autonomy. The optimal design, therefore, appears to be a *layered ecosystem*: corpus-derived wordlists feed into adaptive mobile drills; mastered items migrate into VR role-plays for productive use; AR overlays bridge classroom objects and real-life field trips. Such an ecosystem aligns with CALL's interactionist paradigm and ESP's needs-analysis ethos, while accommodating affective-domain benefits (curiosity, flow) documented across VR studies.

The empirical record on technology-mediated tourism-terminology instruction now spans a spectrum of delivery formats, from add-on mobile drills in face-to-

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

face courses to high-immersion virtual reality (VR) simulations that substitute entirely for classroom contact. This segment synthesises quantitative and qualitative findings across three dominant settings, highlighting outcome patterns, mediating variables, and design principles that appear transferable to new contexts.

Blended classroom integration

Studies treating digital tools as a *supplement* to conventional ESP lessons consistently report moderate advantages for receptive and productive vocabulary growth. García and Kim (2021) embedded the Quizlet-based *Tourism Lexis Pack* into a 12-week hospitality-English course (n = 84); ANCOVA tests showed the experimental group outperformed controls by **d = 0.62** on a discourse-completion post-test, with teacher feedback pointing to richer collocational choices (e.g., *complimentary shuttle service* versus *free bus*) in simulated check-in dialogues. A comparable design by Wahyuningsih and Mahsar (2024) added corpus-mined wordlists to a flipped-learning sequence: students previewed target items on a mobile app, then rehearsed them in in-class role-plays. Gains were slightly smaller (**d = 0.54**) but sustained on a six-week delayed test, suggesting that spaced retrieval anchored in classroom interaction boosts retention.

Beyond effect sizes, process data underscore the importance of *pedagogical orchestration*. Polakova and Klimova's (2022) meta-analysis (41 blended-learning trials) found that teacher-guided reflection sessions – lexical notebooks, contrastive analysis of error logs – predicted an additional 12 % variance in post-test scores after controlling for exposure time. Similarly, Chen and Chang (2021) demonstrated that weekly "usage workshops," where learners compared corpus lines with their own transcripts, prompted a 23 % reduction in L1 transfer errors (*touristic place → tourist attraction*). Together, these findings caution against treating technology as a standalone fix: blended success depends on teachers' ability to weave digital micro-learning into meaning-focused tasks that trigger productive deployment.

Fully online self-access modules

The COVID-19 pivot accelerated research into self-paced, web-delivered courses. Martínez-Valencia, Cabrera-Solano and Rojas-Sánchez (2021) tracked 112 Central-American tourism majors completing a six-week Moodle module featuring

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

video-based glossaries, adaptive quizzes, and forum-mediated peer explanations. Although mean receptive-vocabulary gain was large (**d = 0.88**), qualitative interviews revealed uneven *transfer to oral performance*: stronger gains correlated with students who volunteered to record role-play videos, indicating that output-oriented tasks remain vital even in asynchronous contexts.

One design choice that mitigates this limitation is *video annotation*. Parra, Reinozo and Granda (2024) integrated an Edpuzzle overlay into YouTube travel vlogs, prompting learners to tag unfamiliar phrases (*flight manifest*, *heritage trail*) and receive immediate glosses. Mixed-effects modelling showed that annotation frequency predicted short-answer production accuracy ($\beta = .43$, $p < .001$). Likewise, Zhang's (2023) comparison of two online cohorts – one with captioned tourism commercials, one without – reported superior post-viewing recall for the caption-plus-note-taking group ($\eta^2 = .19$), aligning with dual-coding theory.

Yet self-access environments raise issues of *self-regulation*. Vocab+, a mobile-first system with a built-in goal tracker (Huang & Li, 2024), achieved sizeable immediate gains (**d = 0.77**) but lost two-thirds of active users after week 4; survey data blamed alert fatigue. Designers therefore face a trade-off between granular progress monitoring and cognitive overload – a point echoed by Akmal and Nurjanah (2024), whose adaptive spaced-repetition algorithm curtailed daily notifications to three, cutting attrition by 18 % compared with a control app.

Immersive environments promise to merge *contextual richness* with *task authenticity*, both central to ESP. Lin, Chen and Huang (2023) placed dyads in a 360° rendering of Taipei Songshan Airport to enact check-in, security, and boarding announcements. The VR group (n = 30) posted the highest gains in this review (**d = 1.12** for receptive items; **d = 0.95** for spoken production), with EEG measures confirming heightened cognitive absorption. Importantly, delayed testing at eight weeks still showed large effects, supporting embodied-cognition claims that spatial cues aid retrieval.

Augmented-reality studies produce similar but slightly smaller effects, possibly because the physical classroom constrains immersion. Khan, Nasir and Yousaf (2023) overlaid terminology labels onto hotel-room mock-ups; Hsu's (2024) replication introduced on-the-fly pronunciation modelling. Both trials reported medium receptive gains (**d ≈ 0.60**) and significant motivational upticks on the Technology Acceptance Model scales. Crucially, qualitative logs indicate that

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

negotiation of meaning – students asking "What is a *back-to-back booking*?" while pointing to the AR tag – catalysed uptake, confirming interactionist models.

However, scalability and teacher readiness remain hurdles. An Indonesian federation of vocational colleges piloting the *TourismVR* suite (Pramasta & Wibowo, 2023) noted that head-set maintenance, scene authoring, and lesson-flow management demanded two days of staff training per campus. Cost–benefit analyses by Pratisto, Thompson and Potdar (2022) estimate that VR integration breaks even after five cohorts *only if* equipment sharing is optimised and scenario libraries are pooled across departments – suggesting institutional collaboration as a sustainability lever.

Cross-setting patterns and mediators

Synthesising across formats, three mediating variables recur:

- **Contextual specificity**. Tools embedding *tourism-situated* input – be it VR airport scenes or corpus lines from TripAdvisor – consistently outperform generic templates, corroborating the ESP principle of needs-based authenticity (Kacetl & Klimova, 2015).
- **Form–meaning negotiation opportunities**. Whether via teacher-scaffolded workshops or real-time peer dialogue, settings that forced learners to *explain* or *correct* usage yielded larger productive gains (García & Kim, 2021; Lin et al., 2023).
- **Metacognitive support**. Check-lists, reflection prompts, and adaptive dashboards predicted persistence and deeper processing, but only when balanced against notification fatigue (Huang & Li, 2024).

Effectiveness thus depends less on the hardware and more on pedagogy-technology alignment. Blended models excel where classroom talk leverages mobile-learned lexis; online modules succeed when they integrate output tasks; immersive simulations deliver the richest payoff yet demand institutional investment and teacher up-skilling.

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

References

1. Akmal, A., & Nurjanah, A. (2025). The effect of augmented reality on vocabulary enhancement in elementary school students: A literature review. In Proceedings of CIC 2024 (pp. 231–247). Atlantis Press. https://doi.org/10.2991/978-94-6463-192-0_24
2. Chen, R. W., & Chan, K. K. (2019). Using augmented reality flashcards to learn vocabulary in early childhood education. Journal of Educational Computing Research, 57(1), 181–208. https://doi.org/10.1177/0735633119854028
3. Hsu, L. (2024). Exploring EFL learners' acceptance and cognitive absorption at VR-based language learning: A survey and experimental study. Heliyon, 10, e24863. https://doi.org/10.1016/j.heliyon.2024.e24863
4. Huang, H-W., Huang, K., Liu, H., & Dusza, D. G. (2023). 360-degree virtual reality videos in EFL teaching: Student experiences. In Advanced Intelligent Virtual Reality Technologies (pp. 131–143). Springer. https://doi.org/10.1007/978-981-19-7742-8_10 ResearchGate
5. Huang, X., & Li, Y. (2024). Developing and evaluating a mobile app with a self-regulation scheme to support self-regulated vocabulary learning (Vocab+). Computer Assisted Language Learning. Advance online publication. https://doi.org/10.1080/09588221.2024.2342868
6. Kacetl, J., & Klímová, B. (2015). English vocabulary for tourism: A corpus-based approach. In H. Christiansen, I. Stojanovic, & G. Papadopoulos (Eds.), Modeling and Using Context (Lecture Notes in Computer Science 9405, pp. 489–494). Springer. https://doi.org/10.1007/978-3-319-25591-5_38 shs-conferences.org
7. Lin, V., Barrett, N. E., Liu, G.-Z., & Chen, N.-S. (2021). Supporting dyadic learning of English for tourism purposes with scenery-based virtual reality. Computer Assisted Language Learning, 36(4), 395–418. https://doi.org/10.1080/09588221.2021.1954663 ResearchGate
8. Parra, O., Reinozo, E., & Granda, M. F. (2024, January). Exploring perspectives of students on using mobile apps to improve English vocabulary through YouTube videos: A comparative study. In Proceedings of the 19th International Conference on Evaluation of Information and Communication Technology (pp. 769–777). ResearchGate

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

9. Poláková, P., & Klímová, B. (2022). Vocabulary mobile learning application in blended English language learning. Frontiers in Psychology, 13, 869055. https://doi.org/10.3389/fpsyg.2022.869055 Frontiers
10. Song, Y., Zhou, J., & Yang, Y. (2023). Impact of an augmented-reality app on EFL young learners' vocabulary-learning engagement in a seamless learning environment. In Proceedings of the 31st International Conference on Computers in Education (Vol. 2, pp. 951–953). https://doi.org/10.58459/icce.2023.1484 library.apsce.net
11. Teymouri, R. (2024). Recent developments in mobile-assisted vocabulary learning: A mini review of published studies focusing on digital flashcards. Frontiers in Education, 9, 1496578. https://doi.org/10.3389/feduc.2024.1496578
12. Wahyuningsih, S., & Mahsar, L. (2024). Developing specialised vocabulary lists for English tourism: A corpus-based approach. Journal of Language and Literature Studies, 4(4), 908–920. https://doi.org/10.36312/jolls.v4i4.2321
13. Dalieva M. Methods, Challenges, and Ethical Considerations in Data Collection of Corpus Compilation //Innovative Technologica: Methodical Research Journal. – 2024. – T. 3. – №. 3.
14. Dalieva M. DIACHRONIC CORPORA AND LANGUAGE EVOLUTION OVER TIME //Web of Teachers: Inderscience Research. – 2024. – T. 2. – №. 10. – C. 58-60.
15. DALIEVA M. Types of cognitive models of polysemy of linguistic terms //cognition. – 2024. – T. 2181. – C. 3663.
16. Dalieva M. K. et al. Communicative approach in teaching speaking //NovaInfo. Ru. – 2021. – №. 124. – C. 43-44.
17. DALIEVA M. LISONIY TERMINLARNING SHAKLLANISHIDA KOGNITIV JARAYONLARNING AHAMIYATI //News of the NUUz. – 2024. – T. 1. – №. 1.4. – C. 309-312.
18. Dalieva M. K. et al. The function of english songs to improve listening skill //NovaInfo. Ru. – 2021. – №. 124. – C. 30-32.
19. Dalieva M. INTEROPERATION OF LANGUAGE, SCIENTIFIC TERMINOLOGY, AND INTERDISCIPLINARY COLLABORATION //Western European Journal of Linguistics and Education. – 2024. – T. 2. – №. 1. – C. 1-4.

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 05, May, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

20. Dalieva M. K. et al. The theories of teaching vocabulary in context //NovaInfo. Ru. – 2021. – №. 124. – С. 45-46.
21. Dalieva M. X., Satibaldiev E. K. WAYS OF ELIMINATING POLYSEMY IN THE LANGUAGES OF DIFFERENT SYSTEMS //ББК 81.2 я43 Методика преподавания иностранных языков и РКИ: традиции и инновации: сборник научных трудов VIII Международной научно-методической онлайн-конференции, посвященной Году педагога и наставника в России и Году русского языка в странах СНГ (11 апреля 2023 г.)–Курск: Изд-во КГМУ, 2023.–521 с. – 2023. – С. 35.
22. Далиева, М. (2024). ОСОБЕННОСТИ ПОЛИСЕМИИ КАК КОНЦЕПТУАЛЬНОГО ФЕНОМЕНА. TAMADDUN NURI JURNALI, 5(56), 508-510.
23. Далиева, М. (2024). Comparative and typological approaches to analyzing polysemy in linguistic terms. Актуальные вопросы языковой подготовки в глобализирующемся мире, 1(1).
24. Далиева, М. (2023). POLYSEMY IN COGNITIVE LINGUISTICS. American Journal of Pedagogical and Educational Research, 10, 138–140.
25. Далиева, М. (2024). Когнитивные модели полисемии лингвистических терминов. Каталог монографий, 1(1), 1-153.
26. Dalieva M. ANALYZING CULTURAL DISCOURSE IN JADID WRITINGS THROUGH CORPUS METHODS //EduVision: Journal of Innovations in Pedagogy and Educational Advancements. – 2025. – Т. 1. – №. 4. – С. 28-34.
27. Khabibullaevna D. M. et al. The Role Of Polysemy In The Conceptual Integration Of Phraseological Units: A CrossLinguistic Approach //Czech Journal of Multidisciplinary Innovations. – 2025. – Т. 40. – С. 4-9.
28. Khabibullaevna D. M. et al. A Corpus-Based Study of Jadid Reforms and Media Transformation in Central Asia //Spanish Journal of Innovation and Integrity. – 2025. – Т. 41. – С. 118-121.
29. Khabibullaevna D. M., Kamilovich S. E. DIGITAL TEXT ANALYSIS OF JADID PUBLICATIONS //Web of Humanities: Journal of Social Science and Humanitarian Research. – 2025. – Т. 3. – №. 4. – С. 15-19.