



Original Research

Content-based instruction for psychology majors: Issues and solutions for ESP curriculum development

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English for Specific Purposes (ESP) has been widely integrated into higher education, but psychology has not yet received systematic attention within this framework. Existing courses tend to emphasise general academic skills and simplified texts, leaving a gap in provision of instruction consistent with the communicative practices of the discipline. The purpose of this article is to determine the potential of content-based instruction (CBI) to establish a structured approach to integrating language study with psychology-specific discourse, while identifying obstacles that arise in curriculum design. The study used a qualitative comparative methodology that combined text and genre analysis with curriculum audit. A corpus of fifty psychology texts comprising research articles, case reports, ethical documents, and poster guidelines was analysed for rhetorical organisation, lexical clusters, modality, and multimodal features. These findings were systematically compared with the contents of an existing ESP syllabus and textbook for psychology majors. The analysis showed that psychology requires competence in genres ranging from empirical reporting and diagnostic narration to ethically binding documentation and multimodal dissemination. In contrast, the curriculum reviewed concentrated on essays, oral presentations, and general vocabulary lists, with little exposure to authentic disciplinary texts. The results demonstrate a substantial gap between disciplinary requirements and current practice. The study argues that CBI provides a viable framework for addressing this misalignment by extending genre coverage, incorporating unadapted texts, integrating multimodal tasks, and focusing on discipline-specific lexis. The implications are pedagogical and institutional, calling for closer collaboration between language instructors and psychology faculty to bring ESP provision into correspondence with professional training.

KEYWORDS: *English for Specific Purposes, content-based instruction, CBI, psychology major, genre analysis, curriculum design, multimodality*

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1. INTRODUCTION

The role and place of English for Specific Purposes (ESP) in higher education has been expanding steadily over the past decades and reflects the growing demand for graduates who can operate effectively in internationalised academic and professional

environments. ESP instruction emphasises the development of language skills tailored to specific disciplinary and occupational domains, thereby enabling learners to communicate in English and to engage meaningfully with the conceptual and methodological frameworks of their fields. Within this paradigm, content-

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based instruction (CBI) has emerged as a pedagogical approach of particular relevance, as it integrates the acquisition of subject matter knowledge with the simultaneous development of language competence. Such integration is especially pertinent in disciplines where professional practice is heavily reliant on specialised terminology, discourse genres, and modes of reasoning.

Psychology constitutes one of these disciplines. Students majoring in psychology represent a distinct group with specific linguistic and professional requirements that differentiate them from learners in other academic fields. Their training entails consistent engagement with academic literature, empirical research reports, diagnostic manuals, case studies, and professional communication scenarios, all of which are linguistically and cognitively demanding. Unlike students in medicine, who often focus on highly standardised terminologies and procedural communication, or those in business studies, who concentrate on negotiation and persuasive discourse, psychology students are required to master the interpretive and descriptive modes of academic communication as well as the interpersonal, ethically sensitive discourse of clinical and counselling contexts. These requirements necessitate an ESP curriculum that develops general academic skills such as reading comprehension and academic writing and equips learners with the ability to handle discipline-specific genres, terminologies, and communicative practices.

Despite the evident importance of tailoring ESP curricula to psychology majors, existing instructional models often fail to adequately align language training with the epistemological and professional characteristics of the discipline. General ESP courses in the humanities and social sciences tend to emphasise transferable academic skills, while subject-specific curricula are more commonly developed for fields such as medicine, engineering, or law, which have longer traditions of ESP scholarship. For psychology, the consequence is a persistent mismatch between curricular design and the actual communicative demands that

students face in their academic studies and future professional practice. Among the most salient challenges are the scarcity of authentic materials adapted for pedagogical use, the difficulty of balancing cognitive load between disciplinary content and language acquisition, and the limited preparedness of language instructors who may lack a background in psychology.

The present study addresses the challenges outlined above by posing the following research question: How can CBI be effectively applied to the ESP curriculum for psychology majors, and what issues and solutions emerge in the process? The purpose of the article is to examine the potential of CBI to provide a systematic framework for integrating language learning with disciplinary content in psychology, while also identifying the obstacles that may arise in curriculum design and implementation.

The novelty of this research lies in its disciplinary focus. While the application of ESP and CBI methodologies has been widely explored in professional fields with clear communicative conventions, psychology remains comparatively underrepresented in the literature. Studies that do address psychology students’ needs often do so in fragmentary ways, as they focus on vocabulary development or general academic writing skills rather than the construction of comprehensive curricular solutions. This study intends to develop a systematic account of issues and solutions specific to ESP for psychology majors to contribute both to the field of applied linguistics and to the practice of curriculum development in higher education.

2. THEORETICAL BACKGROUND

2.1. ESP and CBI

English for Specific Purposes (ESP) is grounded in the premise that language learning is inseparable from disciplinary participation and communicative purpose. Recent overviews emphasise that ESP has moved beyond lists of specialist lexis toward modelling the discourse, practices, and identities of knowledge communities, with course aims derived from concrete analyses of target settings and genres rather than generic proficiency scales. This shift is visible in contemporary syntheses that foreground disciplinary literacies, genre knowledge, and situated assessment as core ESP concerns (Hyland, 2022; Akopova, 2024).

Within this paradigm, CBI positions disciplinary knowledge as both the vehicle and the objective of language learning. Foundational work framed CBI as a curriculum stance rather than a method, specifying design principles (e.g., sequencing around content topics, using authentic texts, aligning assessment with content tasks) and warning against ‘language-through-osmosis’ assumptions (Stoller, 2004). Subsequent accounts systematised teacher moves (raising form awareness without derailing content learning) and proposed design heuristics (e.g., the *Six Ts* of themes, topics, texts, tasks, transitions, and threads) (Lyster, 2017). CBI thus provides a theoretically coherent route for ESP to couple language outcomes with disciplinary participation.

At the same time, slippage between CBI and Content and Language Integrated Learning (CLIL) has generated conceptual ambiguities that matter for higher-education ESP. Comparative analyses argue that while both are dual-focus, CLIL is typically system-level (often programme-wide or institutionally mandated) whereas CBI is course-level and instructor-mediated; CLIL often prioritises content objectives with language support, whereas CBI tends to articulate language objectives explicitly alongside content (Cenoz, 2015). Meta-analytic evidence indicates that integrated approaches yield sizeable gains in language development relative to non-integrated instruction, but effect sizes vary with age, program model, and outcome measures – critical variables when extrapolating findings to domain-specific ESP at university level (Lee et al., 2023; Grishechko, 2023).

A second long-running debate concerns authenticity. Early ESP work equated authenticity with unedited professional texts, but more recent critiques differentiate product authenticity (provenance of materials) from process and task authenticity (the uptake, purposes, and social consequences of classroom activity) (Gilmore, 2007). Under this view, authenticity is achieved when learners engage with ‘real’ disciplinary problems, roles, and audiences (even when texts are adapted), thereby aligning with motivation, identity investment, and transfer (Gilmore, 2019). Studies of communicative environments in specific cultural contexts further illustrate how authenticity is shaped not only by textual provenance but also by the socio-pragmatic realities of learners’ environments (Namrueva & Petrulovich, 2015). For ESP course design, this reorientation justifies purposeful scaffolding of domain materials to balance comprehensibility with epistemic fidelity (Malyuga, 2019).

A third line of development integrates CBI with genre-based pedagogy. Genre research shows that disciplinary communities routinise purposes, rhetorical moves, and lexical-grammatical resources. Teaching these explicitly supports participation in knowledge-making practices rather than generic ‘skills’ (Hyland, 2007; Deveci, 2025). In ESP, genre-based CBI links reading and writing of target genres to the social actions they perform (e.g., reviewing literature to position claims, reporting methods to warrant inference), thereby furnishing principled criteria for selecting texts, sequencing tasks, and engineering feedback (Airey, 2016). This integration addresses a recurrent weakness of content-only models: under-specification of language form/function at points where genre conventions do the heaviest epistemic work.

Methodologically, ESP-CBI design depends on needs analysis that is validated against target-situation performance (Bocanegra-Valle, 2016). The canonical volume on needs analysis codifies triangulation across genre audits, observations, and performance sampling (Long, 2005). Later work extends this to programme-level evaluation linking needs analysis to outcomes. In practical terms, this means deriving curricular targets from what learners must do (e.g., read method sections to extract design decisions, deliver ethics-compliant briefings), not from what syllabi traditionally include (Smith et al., 2022).

Nevertheless, integrating content and language introduces design tensions that matter acutely in the social sciences, where knowledge is less procedurally standardised than in technical fields. Four recurrent challenges surface in the literature. First, focus balance: without principled focus on form, language development can plateau, yet excessive form-focus may distort content aims. The ‘counterbalanced instruction’ model addresses this by sequencing cycles of comprehension, awareness, and production that systematically push attention to language as it mediates content learning (Cammarata et al., 2016). Second, cognitive load: dense conceptual content, specialised terminology, and unfamiliar genre conventions can overload working memory unless tasks are staged and redundancy reduced (Sweller, 2020; Grishechko & Tomalin, 2025; Druzhinin, 2025). Third, assessment alignment: if assessments reward content recall more than discourse performance, learners (and teachers) rationally deprioritise language learning. Programme evaluation studies argue for dual-criterion rubrics anchored in target-genre moves (Richards & Pun, 2023). Fourth, teacher knowledge and collaboration: ESP teachers often report gaps in disciplinary knowledge, while subject specialists report uncertainty about language objectives. Recent reviews recommend structured collaboration models and teacher education that explicitly builds genre and discourse expertise (Supunya, 2023).

In sum, contemporary research portrays CBI as a powerful but designed intervention in ESP, not a mere choice of materials. A defensible ESP-CBI course makes its language outcomes explicit, derives tasks from target-situation genres, attends to focus-on-form through counterbalanced cycles, manages cognitive load through principled scaffolding, aligns assessment with dual aims, and organises teacher collaboration around shared genre knowledge. These positions consolidate advances in ESP (disciplinary literacy and genre), integrate evidence from integrated-content programmes (effect sizes and boundary conditions), and answer longstanding critiques about authenticity and form-content balance. This furnishes a theoretically coherent and empirically grounded basis for ESP curriculum development in discipline-specific contexts.

2.2. Previous approaches in ESP across disciplines

Research across multiple professions shows that ESP grounded in CBI is most effective when course design is driven by the genres, tasks, and epistemic norms of each field rather than by generic language objectives. What follows synthesises approaches from medicine and nursing, business and management, engineering and other STEM domains, law, aviation and maritime sectors, tourism/hospitality, and computing/data science, drawing out design principles, known pitfalls, and credible transfer points to psychology.

Medical ESP has long paired authentic documentation (case reports, clinical guidelines, research articles) with genre-explicit teaching, but the last decade’s rapid uptake of simulation has materially changed what ‘authenticity’ looks like pedagogically. Large-scale reviews in health professions education indicate that

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simulation improves clinical performance and patient safety outcomes, which in ESP terms translates into content-anchored speaking, listening, and note-taking under time pressure and ethical constraints (Elendu et al., 2024). These contexts force explicit attention to stance, mitigation, and risk communication, which are language features that are central to clinical reasoning. Recent work also examines the identities of clinicians who serve as ESP facilitators in simulation programmes and show the need to balance disciplinary fidelity with deliberate language focus (Walker et al., 2025). These studies point out that ‘authenticity’ is best operationalised as realistic roles, artifacts, and consequences, and not just unedited texts.

Business-oriented ESP has shifted from ‘terminology + formats’ to communicative competence in English as a Business Lingua Franca (BELF). Ethnographically informed studies demonstrate how effective professionals manage clarity and rapport across lingua-franca interactions in email, meetings, negotiations, and cross-border projects (Roshid et al., 2022). The pedagogical upshot is tasks that assess intelligibility, audience design, and relational work rather than ‘native-like’ phrasing. This stance also reframes assessment: performance rubrics reward success in negotiation, conflict mitigation, and deliverable-oriented documentation (Klimova & Pikhart, 2021). The BELF literature thereby legitimises outcome measures that psychology-focused ESP can adapt (e.g., briefing memos to non-experts, case-conference talk).

In engineering, ESP often couples project-based learning with explicit genre instruction for lab reports, design justifications, and poster/pitch communication. Empirical needs analyses and genre audits show recurrent move structures around problem definition, design constraints, and method selection. These are the features that make engineering a fertile testbed for integrated content–language assessment (Hsu et al., 2025). Programme evaluations in STEM also stress multimodality: students must orchestrate prose, schematics, equations, and visuals, prompting ESP to assess cross-modal cohesion rather than sentences in isolation (Grishechko, 2024). These orientations (task derivation from target genres and multimodal assessment) map cleanly to psychology’s research poster sessions, method write-ups, and ethics applications (Zafarghandi et al., 2017).

Legal English ESP leverages genre analysis to make the rhetorical work of legal texts teachable: establishing jurisdiction and standing, stating claims and defences, citing authority, and crafting remedies. Recent studies on research-article abstracts and litigation documents show that explicit move-structure teaching improves learners’ control over stance, evidentiality, and audience expectations in highly codified settings (Nguyen, 2024). Because legal discourse is adversarial, instruction highlights precision, hedging calibrated to risk, and intertextuality, which are priority foci that resonate with psychology’s needs in ethics statements, informed-consent texts, and case notes where liability and confidentiality matter.

Aviation English research differentiates between ICAO phraseology (formulaic radiotelephony) and ‘plain English’ for non-routine events. Both must be taught and assessed because safety-critical communication breaks down precisely at the boundary between scripted and unexpected (Drayton & Coxhead, 2023). Parallel developments in Maritime English foreground standardised message patterns (e.g., SMCP) and routine ship-to-ship/ship-to-shore discourse, with curricula increasingly built on syllabus audits and teacher interviews to ensure domain-faithful language targets (Zhang & Cole, 2018). Pedagogically, these show the value of (i) controlled phraseology for predictable moves and (ii) scenario-based tasks for emergent problem-solving. This is a duality psychology can emulate in, for example, standardised patient interviews and unstructured counselling talk.

Tourism ESP programmes now incorporate digital-literacy outcomes alongside language aims, acknowledging that frontline communication is mediated by booking systems, review platforms, and multimodal marketing assets. Design-based research in this area aligns task cycles with authentic digital artifacts (service recovery responses, multi-channel itineraries), arguing for assessment that weights user-experience clarity and intercultural appropriateness (Chang, 2024). The relevance for psychology is straightforward: many subfields (e.g., health psychology, organisational psychology) require public-facing, plain-language communication – often in digital environments with lay audiences.

Studies of computing students’ ESP needs identify gaps in technical writing (requirements documentation, API notes, reproducible methods) and in research-genre literacy, even when general English proficiency is adequate (Wahyuni & Darmansyah, 2021). The most successful interventions pair genre models with authentic repositories, code comments, and issue-tracker discourse, treating readability, traceability, and reproducibility as language-mediated quality criteria (Balaei & Ahour, 2018; Kuznetsova & Petrulovich, 2018). For psychology (where preregistrations, method sections, and data-availability statements are increasingly normative) this alignment of language with transparency and replication is instructive.

Across these disciplines, effective ESP-CBI is neither ‘language through osmosis’ nor ‘content with glosses’. It is designed instruction that (i) models the social actions of target genres, (ii)

builds scenario fidelity and consequences into tasks, (iii) calibrates cognitive load and multimodal demands, and (iv) secures alignment among teaching, assessment, and professional performance. These design commitments – evidenced in safety-critical domains (aviation, maritime, medicine), compliance-driven fields (law), outcome-oriented business settings, and multimodal STEM practice – constitute a credible foundation for psychology-specific ESP where students must alternate between interpretive academic discourse and ethically sensitive interpersonal communication.

Thus, the cross-disciplinary literature reveals several consistent lessons. First, the integration of authentic materials is indispensable for developing discipline-specific communicative competence. Second, collaboration between subject specialists and language instructors enhances the effectiveness of curriculum design. Third, the balance between content and language requires careful calibration: too strong a focus on disciplinary content risks overwhelming learners linguistically, while an overly narrow focus on language may fail to prepare them for professional practice. These lessons provide a conceptual foundation for extending CBI into other academic and professional fields, including psychology.

2.3. The gap in ESP for psychology majors

Although ESP and CBI have matured across many professional fields, psychology remains comparatively under-mapped as a distinct ESP domain. In the past few years, several small-scale evaluations and needs analyses focused on psychology cohorts have appeared. These were useful for surfacing perceived needs, but limited by modest samples, single-course perspectives, and a predominant reliance on student self-report rather than performance data or genre audits (Setyowati et al., 2023; Syaufika & Ambarwati, 2023; Ananta et al., 2025; Gorina et al., 2025). This uneven evidence base contrasts with the rich, genre-explicit ESP literatures in medicine, engineering, and law, and it constrains our ability to generalise about design principles suited specifically to psychology.

The communicative profile of psychology justifies more targeted inquiry. Undergraduate and pre-professional learning outcomes endorsed by the American Psychological Association (APA) explicitly include scientific reasoning, research design, ethical communication, and discipline-appropriate writing – outcomes that exceed generic academic English and call for instruction anchored in psychology's genres and reporting practices (APA, 2016). Moreover, the APA's Journal Article Reporting Standards (JARS) formalise the rhetorical load of method, results, and transparency statements, shaping the 'moves' writers must accomplish when communicating quantitative, qualitative, and mixed-methods studies. An ESP curriculum that ignores JARS risks teaching decontextualised prose rather than the regulated discourse psychologists actually produce (APA, 2025). Recent genre-focused analyses underscore the point: studies of psychology articles document cross-linguistic and proficiency-linked differences in move structure and stance (e.g.,

method sections, conclusions), reinforcing the need for discipline-specific language work rather than generic templates (Moradi & Montazeri, 2024; Deng & He, 2023).

Professional preparation in psychology further complicates the picture in ways that generic EAP cannot easily address. Beyond research writing, many pathways (clinical, health, school, organisational) require ethically sensitive, client-facing communication. Assessment and training ecologies in allied areas (psychiatry and clinical psychology practicums) now routinely use standardised/simulated patient encounters and objective structured clinical examinations (OSCEs) to develop and evaluate interviewing, empathy, and risk communication. These approaches have begun to appear within psychology programmes themselves, but they remain largely decoupled from language-focused curricula, leaving a design opportunity for ESP to integrate genre, interactional competence, and assessment (Siemerkus et al., 2023; Sundström & Hakelind, 2023; Sundström et al., 2024). The simulation literature consistently shows gains in communication performance (Elendu et al., 2024). Importing its task design and feedback architectures into ESP for psychology would permit dual-focus assessment on both disciplinary adequacy and linguistic effectiveness.

Where psychology-focused ESP courses exist, materials frequently hew to general academic skills (reading for gist, essay composition, slide presentations) with only sporadic alignment to psychology's genres (e.g., method write-ups, case notes, IRB/ethics applications, plain-language summaries for lay readers) (Akopova, 2016a; Akopova, 2016b). Textbook evaluations and course audits repeatedly note overreliance on decontextualised texts and vocabulary lists, limited engagement with authentic artifacts (consent forms, diagnostic rubrics, preregistration templates), and a lack of validated rubrics tied to disciplinary communicative outcomes. Parallel developments in psychology's dissemination practices heighten the gap: journals and societies increasingly encourage or require plain-language summaries, which entail different stance, audience design, and multimodal demands than research abstracts, yet these deliverables are rarely targeted in ESP syllabi (Setyowati et al., 2023).

Structural factors also work against coherent psychology-ESP development. Reviews of collaboration between language specialists and subject lecturers point out collaboration as a determinant of quality but document persistent institutional and knowledge barriers (e.g., uncertain ownership of outcomes, misaligned assessment regimes, limited teacher access to discipline expertise). These challenges are well described in ESP/EAP generally and remain salient for psychology, where content expertise is distributed across diverse subfields and practicum settings (Li, 2021; Supunya, 2023). In parallel, the growth of English-medium instruction (EMI) across non-Anglophone universities places additional pressure on programmes, including psychology, to couple content mastery with language support, yet EMI studies repeatedly report variability in language focus and teacher preparedness, underscoring the need for formalised, language-aware curriculum models (Varis, 2024; Han, 2023).

Taken together, at least four design needs emerge that current psychology-ESP offerings seldom meet: (i) genre-anchored curricula aligned with APA reporting conventions and psychology's evaluative genres (posters, method write-ups, ethics/consent texts); (ii) task authenticity that reflects real roles and consequences in research and client-facing communication (e.g., standardised-patient interviews, case-conference briefings); (iii) assessment aligned to dual aims, using rubrics that capture disciplinary adequacy and language control rather than sentence-level accuracy alone; and (iv) structured co-teaching/PD models that develop shared genre knowledge between psychology faculty and ESP practitioners. The scattered but converging evidence above specifies the gap not as a mere absence of materials, but as a need for validated, content-integrated designs and assessments tuned to psychology's communicative ecology. A systematic application of CBI to psychology, grounded in needs analysis, genre audits, simulation-supported tasks, and co-designed assessment, would therefore address an identifiable deficit in the ESP literature and practice, with clear payoffs for academic success and professional readiness.

3. MATERIAL AND METHODS

3.1. Research design

The study used text/genre analysis of psychology-specific materials in combination with a curriculum audit of an existing ESP syllabus for psychology majors. This design was chosen because it enables a systematic examination of the discourse demands embedded in psychology as a discipline and allows for a comparison between these demands and the current provision of English language instruction. In this way, the study directly addresses the stated purpose: to evaluate the potential of content-based instruction (CBI) as a framework for integrating language learning with disciplinary content, while also identifying obstacles in curriculum implementation.

3.2. Material

Two sets of material were examined:

1. Psychology-specific texts ($n = 50$) included research articles, case reports, ethical documents and instructional artifacts

Research articles ($n = 12$): method and discussion sections selected from peer-reviewed journals in clinical, cognitive, and educational psychology. These sections were prioritised because they operationalise the APA Journal Article Reporting Standards and represent genres students must both comprehend and eventually produce.

Case reports ($n = 11$): anonymised samples drawn from clinical training materials, as they illustrate professional diagnostic reasoning and narrative construction.

Ethical documents ($n = 15$): informed-consent forms and institutional review board templates, chosen for their role in instantiating ethically sensitive/legally binding communication.

Instructional artifacts ($n = 12$): psychology research poster templates and presentation guidelines, reflecting multimodal requirements of professional dissemination.

These texts cover academic, professional, and public-facing genres essential to psychology and were selected to provide a balanced view of the discipline's communicative ecology.

2. ESP curriculum documents ($n = 2$) included one current ESP syllabus for psychology majors and one corresponding course textbook currently used at a partner institution. These were chosen because they represent the baseline of existing practice against which the findings from genre analysis can be compared.

3.3. Procedure

The study proceeded in two interconnected stages. First, the psychology-specific texts were subjected to analysis within a genre-based discourse framework (Swales, 1990; Hyland, 2007). Particular attention was devoted to the identification of rhetorical moves, such as problem framing, methodological justification, ethical stance-taking, and result interpretation, as well as to the recurrent use of lexical bundles and terminology clusters characteristic of psychology discourse. The analysis also examined stance and hedging devices in empirical research writing, interactional features embedded in case reports and consent forms, and the ways in which multimodal cohesion was achieved in research posters. This investigation combined qualitative coding of rhetorical moves with a basic quantitative representation of recurring linguistic features, for example the frequency of reporting verbs or stance markers. The integration of qualitative and quantitative approaches reflects established practices in applied linguistics and makes it possible to capture both the structural and the functional aspects of disciplinary discourse.

The second stage involved a curriculum audit that drew on the analysis of an ESP syllabus and its accompanying textbook. The aim was to determine how closely the existing curriculum corresponded to the discourse demands revealed in the first stage of the study. This was accomplished by tracing the extent to which psychology-specific genres were represented, the degree to which authentic disciplinary materials were incorporated, and the alignment of stated learning outcomes with the communicative practices of the discipline. Attention was also paid to the balance between general academic English skills and domain-specific competencies. Through this comparative exercise, the curriculum audit provided a diagnostic perspective on whether current ESP provision adequately reflects the communicative requirements that emerge from psychology discourse.

3.4. Data analysis

Findings from the genre analysis were tabulated according to genre type, rhetorical move structure, and lexical-grammatical features. These were then compared against the ESP syllabus to identify areas of convergence (e.g., shared emphasis on academic writing skills) and divergence (e.g., neglect of ethical documents or multimodal communication tasks). The analysis thus generated both a descriptive map of psychology's discourse demands and a diagnostic account of gaps in current ESP provision.

‘Thus, the cross-disciplinary literature reveals several consistent lessons. First, the integration of authentic materials is indispensable for developing discipline-specific communicative competence. Second, collaboration between subject specialists and language instructors enhances the effectiveness of curriculum design. Third, the balance between content and language requires careful calibration: too strong a focus on disciplinary content risks overwhelming learners linguistically, while an overly narrow focus on language may fail to prepare them for professional practice. These lessons provide a conceptual foundation for extending CBI into other academic and professional fields, including psychology’

3.5. Methodological justification

The choice of materials reflects the dual nature of psychology as an academic and professional discipline: research articles represent the scientific facet, case reports and consent forms embody the clinical and ethical facet, while research posters illustrate the multimodal dissemination practices increasingly required in professional psychology. The study situates itself within the scientific tradition of ESP research, which relies on empirical discourse analysis and systematic needs assessment to inform curriculum design (Long, 2005; Bocanegra-Valle, 2016). The methodology is modest in scale yet robust enough to evaluate whether CBI can provide a systematic framework for curriculum development and to pinpoint obstacles in its implementation.

4. STUDY RESULTS

4.1. Overview of the corpus

The analysis was conducted on a purposively constructed corpus of fifty psychology-specific texts supplemented by two ESP curriculum documents currently used for psychology majors. The corpus was designed to reflect the communicative diversity of psychology as both an academic discipline and a professional field. It encompassed four distinct text types: research articles, case reports, ethical documents, and instructional artifacts. Together these genres capture the range of discourse practices psychology students are expected to master at different stages of their academic and professional training.

The first category, research articles, comprised twelve texts drawn from peer-reviewed journals in clinical, cognitive, and educational psychology. Only the method and discussion sections were included, since these are the sections most directly regulated by the American Psychological Association’s Journal Article Reporting Standards and therefore provide consistent evidence of rhetorical structuring and disciplinary conventions. The inclusion of articles across three subfields ensured representativeness of disciplinary variation.

The second category, case reports, consisted of eleven anonymised samples taken from clinical training materials. Case reports were selected because they exemplify diagnostic reasoning and narrative construction, which are central communicative practices in psychology yet distinct from the more formulaic style of empirical reporting. Their inclusion allows for comparison between highly structured research genres and more descriptive, interpretive forms of professional writing.

The third category, ethical documents, included fifteen texts such as informed-consent forms and institutional review board (IRB) templates. These were chosen because they instantiate the ethically sensitive and legally binding forms of communication that psychology professionals must produce. Unlike research articles or case reports, ethical documents rely heavily on formulaic language and prescriptive phrasing and thus capture another facet of psychology’s communicative ecology.

The fourth category, instructional artifacts, consisted of 12 research poster templates and presentation guidelines used in undergraduate and postgraduate psychology programmes. These texts were selected for their relevance to multimodal communication and professional dissemination practices. Unlike the other genres, they combine visual and textual modes, requiring students to integrate data display, concise textual explanation, and persuasive framing in a single communicative event.

Alongside the disciplinary corpus, the study examined two ESP curriculum documents, namely one syllabus and one accompanying textbook in current use at a partner institution. These documents were included to provide a baseline of existing pedagogical practice against which the disciplinary demands identified in the corpus could be compared.

In terms of distribution, the corpus shows a balanced representation across academic, clinical, ethical, and multimodal material, with research articles accounting for 24% of the material, case reports for 22%, ethical documents for 30%, and instructional artifacts for 24%. This proportional spread was intentional, designed to avoid overrepresentation of traditional academic writing and to showcase the wider set of genres that psychology students encounter. The overall size of the corpus ($n = 50$) is modest yet sufficient for qualitative and frequency-based analysis, and it reflects established practice in ESP studies that rely on carefully curated rather than large-scale corpora.

This composition gives an overview of the communicative ecology of psychology. The corpus allows for the mapping of the rhetorical, lexical, and multimodal demands placed on learners. It also ensures that the subsequent curriculum audit can be assessed against a representative range of disciplinary practices.

4.2. Genre and discourse features in psychology texts

The analysis of the psychology-specific texts revealed current genre- and discourse-level features that reflect the communicative practices of the discipline. Each text type demonstrated distinctive patterns of rhetorical organisation, lexical usage, and discourse strategies, yet several commonalities could also be observed across genres.

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Research articles displayed a high degree of rhetorical structuring, particularly in the method and discussion sections. The method sections consistently followed predictable move patterns, beginning with statements of participant characteristics and proceeding to descriptions of materials, procedures, and data analysis. These moves were often signalled by recurrent lexical bundles such as *participants were recruited*, *data were analysed using*, and *the procedure consisted of*. Discussion sections, by contrast, showed more variation but typically included interpretive commentary on findings, references to previous studies, and evaluative statements regarding limitations. Stance and hedging devices were prominent, with frequent use of modals (*may suggest*, *could indicate*) and epistemic markers (*likely*, *possibly*) to temper claims. Counts of lexical items indicated a marked prevalence of reporting verbs, most notably *show*, *demonstrate*, and *reveal*, which bring to the fore the discipline's reliance on empirical evidence to frame claims.

Case reports revealed a markedly different discourse profile. Unlike the formulaic structure of research articles, these texts had a narrative organisation, often beginning with a description of the patient's background, followed by a chronological account of presenting problems, diagnostic assessments, and therapeutic interventions. Lexical choices reflected this narrative orientation, with verbs of description and observation (*appeared*, *reported*, *described*) occurring frequently. Interactional features were also more salient in this genre: first-person pronouns, references to dialogue, and evaluative adjectives exposed the interpersonal aspect of clinical reasoning. Compared with research articles, case reports demonstrated less reliance on hedging and greater use of definitive diagnostic language, which reflected the need to convey authority in professional contexts.

Ethical documents (informed-consent forms and IRB templates) were characterised by formulaic and prescriptive discourse. These texts consistently relied on fixed expressions such

as *you are invited to participate*, *your participation is voluntary*, and *confidentiality will be maintained*. The analysis showed a predominance of deontic modality (*must*, *will*, *should*), signalling obligation and assurance. The lexical density of these texts was lower than in research articles. This has to do with an intentional effort to enhance accessibility, yet syntactic structures were nonetheless complex due to embedded conditions and qualifications. The repetitive use of phrases related to risk, confidentiality, and rights signalled the regulatory function of these documents.

Instructional artifacts such as poster templates and presentation guidelines demonstrated the multimodal requirements of disciplinary communication. These texts placed strong emphasis on brevity, clarity, and visual integration. Frequent directives (*summarise the results*, *use bullet points*, *include visuals*) conveyed the instructional purpose of the genre. The language was prescriptive and process-oriented, and multimodal cohesion was explicitly foregrounded through instructions on layout, figure captions, and design conventions. Lexical items emphasising conciseness (*brief*, *clear*, *concise*) were recurrent, which indicated the communicative value attached to economy of expression in poster and presentation formats.

Across all four genres, several cross-cutting discourse features were observed. First, the frequent use of stance markers and hedging in research articles contrasted with the more definitive tone of case reports and the prescriptive modality of ethical documents. Second, the reliance on formulaic expressions was most pronounced in ethical texts but also appeared in instructional artifacts. This suggests that certain communicative functions in psychology are supported by fixed linguistic templates. Third, multimodality emerged as an important element not only in research posters but also in the integration of tables and figures within research articles. This signalled that visual-verbal coordination is a recurrent demand across psychology discourse.

The combined analysis demonstrates that psychology discourse encompasses an array of communicative practices that ranges from empirically grounded, hedged argumentation in research writing to narrative reasoning in case reports, formulaic and legally binding phrasing in ethical documents, and multimodal summarisation in instructional artifacts. Each genre imposes specific linguistic and rhetorical requirements, and together they delineate the communicative environment within which psychology majors are expected to operate.

4.3. Cross-genre patterns

The comparative examination of genres revealed several broader tendencies that traverse psychology discourse and shape its communicative environment. These patterns were not tied to individual genres alone but emerged through contrasts and overlaps across the corpus.

A first pattern concerned the distribution of certainty and authority. Research articles leaned heavily on hedging and epistemic markers to signal caution in knowledge claims, while case reports conveyed diagnostic authority through categorical

phrasing. Ethical documents, in turn, relied on prescriptive modality to establish compliance, whereas instructional artifacts adopted imperative forms to direct student action. Viewed together, these variations reveal a spectrum of stance-taking practices across psychology, ranging from the tentative presentation of empirical findings to the unequivocal assertion of ethical obligations.

A second pattern involved the tension between standardisation and individuality. Highly conventionalised structures dominated research articles and ethical documents, where adherence to APA guidelines or legal formulations dictated textual form. Case reports, by contrast, incorporated greater narrative flexibility and personalised detail, reflecting the individuality of patient cases. Instructional artifacts, as observed, occupied an intermediate position, codifying format while allowing some latitude in visual design. This variation shows how psychology discourse balances institutionalised conventions with context-sensitive narration.

A third pattern related to the integration of multimodality into disciplinary communication. While poster templates and presentation guidelines explicitly foregrounded the combination of text and visuals, other genres (particularly research articles and consent documents) also incorporated visual elements such as tables, diagrams, and structured layouts. The need to navigate both textual and visual semiotic resources thus appears not as an isolated requirement but as a consistent feature across the discipline.

Finally, the analysis identified the recurrence of discipline-specific lexical repertoires. Each genre foregrounded distinct clusters (empirical reporting verbs in research articles, diagnostic descriptors in case reports, rights and obligations in ethical texts, and conciseness-related terms in instructional artifacts) yet these clusters collectively reinforced psychology's epistemic and professional priorities. Despite genre-specific differences, the reliance on specialised vocabulary served to anchor communication in the discipline's conceptual framework.

These cross-genre patterns demonstrate that psychology's communicative practices cannot be understood in isolation. Instead, they operate within a system of contrasts and complementarities, where stance, structure, modality, multimodality, and lexis function differently depending on the genre but collectively define the expectations placed on psychology students and professionals.

4.4. ESP curriculum content

The examination of the ESP syllabus and textbook currently used for psychology majors revealed a curriculum that remains predominantly oriented toward general academic English rather than discipline-specific discourse. The syllabus, structured around thematic units such as Academic Writing, Oral Presentations, and Reading Academic Texts, set out learning outcomes that emphasised broad academic skills, including note-taking, essay composition, summarising, and delivering formal talks. While these objectives correspond to common practices in

English for Academic Purposes, they showed limited explicit engagement with the genres and communicative tasks identified in the psychology corpus.

The textbook accompanying the syllabus mirrored this orientation. The majority of reading passages consisted of general academic or semi-specialised texts, often adapted for pedagogical purposes rather than drawn from authentic disciplinary sources. Exercises prioritised comprehension questions, vocabulary extension, and grammar-focused tasks. Writing assignments were generally framed in terms of producing argumentative essays, reports, or short presentations, with little attention to discipline-specific genres such as empirical research articles, case reports, or ethical documentation. The presence of psychology-related content was mostly confined to short thematic texts on topics such as memory, motivation, or social behaviour, which served as vehicles for language practice but were not analysed as disciplinary discourse.

An audit of the genre coverage indicated that research articles, the central genre in academic psychology, were not represented as authentic exemplars. Students were not systematically exposed to the rhetorical moves of empirical writing, nor were they guided through the conventions of method or discussion sections. Similarly, case reports, which represent a core communicative practice in clinical training, were entirely absent from the syllabus. Ethical documents, such as consent forms or IRB applications, were likewise not included, despite their importance for professional practice. The only partial overlap with disciplinary practice was found in tasks involving poster presentations, which resembled the multimodal communication required in psychology but were framed at a general academic level without reference to APA norms or disciplinary expectations.

In terms of materials design, the textbook and syllabus relied heavily on simplified or adapted input. Authenticity was compromised through the use of modified texts that reduced lexical and syntactic complexity. While such adaptations served to scaffold comprehension, they also limited opportunities for students to encounter the formulaic expressions, stance markers, and multimodal integration characteristic of psychology discourse. The emphasis on generic academic vocabulary lists further reinforced this orientation, with limited systematic attention given to psychology-specific terminology or recurring lexical bundles.

Finally, the balance of skills within the curriculum leaned toward receptive comprehension and general-purpose writing. Speaking activities centred on giving short presentations or participating in seminar-style discussions, without any role-play or simulation of counselling dialogues, case conferences, or research group meetings. Listening tasks were restricted to short academic lectures rather than disciplinary interactions. This configuration provided students with transferable skills but did not align with the communicative ecology documented in the psychology corpus, where disciplinary literacy extends beyond essay writing to include ethical communication, diagnostic narration, and multimodal dissemination.

Taken as a whole, the ESP curriculum presented a structured but generalist approach to academic English. It provided coverage of core study skills but offered little systematic exposure to psychology-specific genres, discursive practices, or professional communicative tasks. This empirical mapping therefore establishes the baseline against which the corpus findings can be compared, allowing subsequent analysis to identify points of convergence and divergence between existing ESP provision and the disciplinary discourse demands of psychology.

4.5. Corpus findings vs ESP curriculum

To assess the extent of alignment between psychology discourse and current ESP provision, the results of the corpus analysis were directly mapped against the content of the syllabus

and textbook. Table 1 summarises the comparison. The table shows that the curriculum intersects with psychology discourse only at a general academic level.

Areas of partial overlap were identified in academic writing and poster presentations, but, as the study has observed, without reference to the rhetorical and lexical conventions found in authentic psychology texts. Substantial divergence was observed in relation to case reports and ethical documentation, both of which were central to the disciplinary corpus yet absent from the curriculum.

Following study results, Lexical and skills coverage also proved misaligned: psychology-specific clusters and multimodal demands present in the corpus were not reflected in the textbook or syllabus.

Table 1
Alignment of psychology discourse features with ESP curriculum

| GENRE / FEATURE | CORPUS EVIDENCE (TEXTS ANALYSED) | ESP CURRICULUM COVERAGE | ALIGNMENT STATUS |
|-----------------------------------|--|--|-----------------------|
| Research articles | 12 texts; structured methods and discussions; frequent reporting verbs; hedging and stance markers | Simplified academic texts; essay/report writing tasks; no authentic articles | Partial, generic only |
| Case reports | 11 texts; narrative structuring; diagnostic lexis; interpersonal features | Absent from syllabus and textbook | None |
| Ethical documents | 15 texts; formulaic language; deontic modality; risk/confidentiality lexis | Absent from syllabus and textbook | None |
| Instructional artifacts (posters) | 12 texts; multimodal cohesion; directives on concision and visuals | Poster presentations included but treated generically, no APA conventions | Partial, limited |
| Lexical bundles | Discipline-specific clusters (reporting verbs, diagnostic terms, deontic | General academic vocabulary lists, not discipline-specific | Limited |
| Skills balance | Reading, writing, speaking, multimodal integration across genres | Reading and writing emphasised; minimal oral/multimodal practice | Narrow focus |

5. DISCUSSION

5.1. The potential of CBI for psychology

The purpose of this study was to establish the potential of CBI as a framework for integrating language learning with disciplinary content in psychology and to identify obstacles in curriculum design and implementation. The study has generated empirical evidence of both convergences and divergences between disciplinary practices and current instructional provision.

The corpus analysis demonstrated that psychology operates through a diverse communicative ecology encompassing research articles, case reports, ethical documents, and multimodal instructional artifacts. Each genre embodies distinctive rhetorical structures and linguistic resources that align with the epistemological and professional priorities of the discipline: empirical caution in research writing, authoritative diagnostic narration in

case reports, prescriptive modality in ethical texts, and conciseness combined with visual integration in posters. These findings confirm that psychology discourse extends beyond general academic English and requires mastery of discipline-specific genres.

CBI, as established in ESP literature (Snow & Brinton, 2023; Hyland, 2007; Kolmogorova et al., 2024; Slivnaya et al., 2023; Samofalova et al., 2023), is designed precisely to bridge this gap by embedding authentic disciplinary content into language instruction. In the case of psychology, a CBI approach would allow learners to engage directly with the genres they must eventually produce and interpret, while simultaneously acquiring the linguistic resources necessary to participate in disciplinary communication. The potential of CBI therefore lies in its ability to align instructional content with the actual communicative practices of psychology, reducing the disconnect between language study and professional preparation.

'The comparison between the corpus findings and the ESP curriculum revealed significant limitations in current provision. While the syllabus included some generic academic genres, such as essays and poster presentations, these were presented at a generalist level, with little attention to disciplinary conventions. The most striking gap was the complete absence of case reports and ethical documents, which together accounted for over half of the disciplinary texts analysed. Even research articles, which are central to academic psychology, were represented only through simplified or adapted versions. This stripped them of the rhetorical and lexical complexity that learners must eventually deal with'

5.2. Obstacles in current curriculum design

The comparison between the corpus findings and the ESP curriculum revealed significant limitations in current provision. While the syllabus included some generic academic genres, such as essays and poster presentations, these were presented at a generalist level, with little attention to disciplinary conventions. The most striking gap was the complete absence of case reports and ethical documents, which together accounted for over half of the disciplinary texts analysed. Even research articles, which are central to academic psychology, were represented only through simplified or adapted versions. This stripped them of the rhetorical and lexical complexity that learners must eventually deal with.

These findings mirror challenges identified in other ESP contexts. Research in medical and legal English has consistently shown that generic academic tasks provide insufficient preparation for professional communication, as they neglect the rhetorical demands and formulaic language of specialised genres (Candlin & Candlin, 2003; Ferguson, 2025). Similar observations have been made in engineering, where project-based genres and multimodal integration are often underrepresented in ESP curricula (Hsu et al., 2025). The psychology case illustrates the same structural problem: curricula tend to prioritise transferable skills at the expense of discipline-specific practices, creating a mismatch between instruction and communicative reality.

5.3. Implications for CBI implementation

The findings point to several implications for how CBI could be applied to psychology. First, curriculum design should expand the range of genres used in instruction, moving beyond essays and presentations to include case reports, ethical documents, and authentic research articles. This does not imply abandoning general academic skills, but rather incorporating them within disciplinary contexts, for example by teaching summarisation or argumentation through the medium of psychology texts.

Second, the analysis exposes the need to address multimodality explicitly. Psychology communication, whether in research articles with figures and tables or in posters with integrated visuals, requires competence in coordinating textual and visual modes. CBI provides a natural framework for addressing this integration, as it situates language learning in authentic multimodal tasks.

Third, lexical coverage in the curriculum needs to shift from general academic lists to systematic treatment of psychology-specific clusters and formulaic sequences. Evidence from discourse-analytic studies shows that recurrent lexical patterns play a significant role in shaping disciplinary communication, and their pragmatic value becomes visible through co-occurrence analysis (Malyuga & Rimmer, 2021). CBI's emphasis on authentic input offers an effective mechanism for exposing learners to such patterns and for developing their productive use in writing and speech.

Finally, implementation of CBI in psychology will require collaboration between language instructors and disciplinary specialists. As noted in other fields (Basturkmen, 2010; Bocanegra-Valle, 2016), successful integration depends on co-design, where subject specialists ensure content fidelity and language instructors focus on scaffolding linguistic access. Without such collaboration, curricula risk either oversimplifying disciplinary content or overburdening learners with unmediated texts.

5.4. Limitations and directions for further research

The present study has limitations that should be acknowledged. The corpus, while diverse, was modest in size and restricted to a small set of representative genres. The curriculum audit was based on a single syllabus and textbook, which may not capture variation across institutions. Future research should broaden the scope to include multiple programmes, larger corpora, and longitudinal observation of how psychology students engage with CBI-based materials in practice. Classroom-based interventions and student performance data would further substantiate the effectiveness of proposed curricular reforms.

6. CONCLUSION

This study investigated the potential of content-based instruction (CBI) to provide a systematic framework for integrating language learning with disciplinary content in psychology and to identify obstacles in curriculum design and implementation. Through text and genre analysis of psychology-specific materials and a comparative audit of an existing ESP syllabus and textbook, the study has mapped the communicative practices central to psychology and assessed the extent to which these are represented in current instructional provision.

The results demonstrated that psychology discourse is organised around a range of genres (research articles, case reports, ethical documents, and multimodal instructional artifacts) each requiring distinctive rhetorical, lexical, and multimodal competences. However, the ESP curriculum analysed showed only partial alignment with these practices, concentrating on general

academic English skills while omitting the discipline-specific genres most critical to professional preparation. The divergence was particularly evident in the absence of case reports and ethical documentation, as well as the reliance on simplified rather than authentic research articles.

These findings point to the relevance of CBI as a pedagogical framework capable of bridging the gap between generalist instruction and disciplinary communication. Integrating authentic psychology materials into instruction, broadening genre coverage, and systematically incorporating multimodal and discipline-specific lexical practices positions CBI as a means of fostering both language proficiency and professional preparedness. While the study provides one of the first systematic mappings of psy-

chology discourse in relation to ESP curriculum design, it is limited by the modest size of its corpus and the focus on a single syllabus and textbook. Future research should broaden the empirical base through larger and more varied corpora, multi-institutional curriculum audits, and classroom-based interventions that test the effectiveness of CBI in practice.

The study contributes to applied linguistics and ESP pedagogy as it demonstrates that psychology represents a distinct and underexplored disciplinary context in which CBI holds considerable promise. Addressing the identified curricular gaps will strengthen language instruction for psychology majors and advance the agenda of aligning ESP with the authentic communicative practices of diverse academic and professional fields.

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