

I. INTRODUCTION

English has emerged as the preeminent language of the contemporary world, owing to its function in enabling international communication, a requirement propelled by variables including globalization, economic expansion, breakthroughs in research and academics, and technological innovation. English for Specific Purposes (ESP), a subset of English Language Teaching (ELT), arose from a notable transformation in applied linguistics that departed from conventional theories and pedagogical methods, especially the structural approach that prioritized syntax and grammar. ESP is distinguished from ordinary English by its specialized emphasis: ESP courses focus solely on the linguistic competencies and characteristics necessary for certain circumstances, while mainstream English courses encompass a wider array of language components without addressing specific requirements (Basturkmen, 2006; Robinson, 1991; Strevens, 1988). The global recognition of the significance of English learning necessitates a specialized, needs-based strategy to facilitate individuals in learning essential English skills more efficiently. All these distinctions are applicable for English for Medical Purposes (EMP) which, in its turn, addresses the linguistic demands of healthcare disciplines. The present study explores the needs of medical students in particular.

The global imperative of English for healthcare professionals is seen in the large body of medical literature published in this language (Crystal, 2003; Montgomery, 2013). English serves as the universal language of health and science, enabling access to contemporary research, fostering international collaboration, and enhancing professional mobility.

In Algeria, the incorporation of English into medical education continues to encounter significant structural and pedagogical obstacles. These factors encompass constrained institutional resources, diverse proficiency levels among students, and the established dominance of French in academic and clinical environments (Djaileb, 2018; Berrabah & Toubaida, 2024; Idri, 2025 a, 2025b, 2025c; Sahnoune, 2024). This scenario occurs within a multifaceted sociolinguistic context where French persists as the predominant language in professional and higher education sectors, despite enduring Arabisation initiatives, thereby complicating the integration of English as a tertiary academic language (Chennouf & Abdelhamid, 2025; Chahboub & Belaidi, 2025).

Despite considerable research highlighting the global significance of English in healthcare and scientific discourse, limited studies have explored how Algerian institutions may effectively implement this transformation in a contextually relevant manner (Saidani & Belmihoub, 2025). Furthermore, although multimodal pedagogy—employing digital tools, visual resources, and interactive learning environments—has demonstrated efficacy in similar international contexts (Espinoza, 2023; Kurniawati & Rohmah, 2024), its pedagogical potential in Algerian medical education remains insufficiently investigated.

Similar considerations pertain to other technology-enhanced, data-driven methodologies like Data-Driven Learning (DDL), which provide learners with real linguistic input via corpus-based exploration, however have garnered less empirical scrutiny within Algerian ESP practice (Boumediene, 2025). This ongoing research deficiency underscores the necessity for adaptive, contextually aware instructional frameworks that may harmonize Algeria's bilingual academic landscape with the requirements of English-medium medical education. Hence, this study questions how a structured multimodal framework can resolve these pedagogical issues and facilitate a more seamless transition to EMI in Algerian medical faculties.

This pilot study, conducted during the 2023-2024 academic year at the Faculty of Medicine (University of Bejaia), aims to analyse the English language needs of second-year medical students and evaluate the feasibility of multimodal pedagogy in their EMP curriculum (PRFU Project, 2023). This preparatory phase for a larger study in 2024-2025 included 32 voluntary participants from the second-year cohort, all of whom were enrolled in a mandatory English

module (1.5 hours/week) centered on medical terminology, such as anatomy and physiology. The sample, selected from the complete cohort, serves as an initial investigation into the potential of interactive, multimodal teaching methods—adapted to students' linguistic and professional requirements—to improve medical English learning within Algeria's Francophone environment. This study examines the following questions:

- What are the specific English language needs for second-year medical students at Bejaia University?
- What are second-year medical students' attitudes towards learning English in a multimodal context?
- What is the perception of students regarding the role of English in their academic studies and prospective medical careers?
- What methods and materials do students favor for learning English, especially within a medical context?
- To what extent do students value project-based learning in the development English skills?

1. English for Specific Purposes in Algeria

Broadly speaking, ESP is characterized by researchers in applied linguistics as a learner-centered methodology in language instruction that centers the particular linguistic and communicative requirements of learners in a specialized domain (Hutchinson & Waters, 1987; Robinson, 1991). In addition, ESP practitioners accommodate their education by putting focus on the discourse, vocabulary, and genres relevant to the specific subject. They often employ real materials and omit extraneous language abilities (Dudley-Evans & St John, 1998; Basturkmen, 2006; Anthony, 2018). This approach centers on needs analysis, a procedure that identifies the individual linguistic requirements of learners within their respective domains (Hutchinson & Waters, 1987).

Again, ESP encompasses particular domains designed to address the distinct communication needs of professional and academic sectors, markedly deviating from general English instruction. The classifications include: (1) English for Academic Purposes (EAP), subdivided into general (EGAP) and discipline-specific (ESAP) skills (Carkin, 2005); (2) English for Occupational Purposes (EOP), designed for fields such as business and law (Carkin, 2005; Otilia, 2015); and (3) specialized variants, encompassing EMP, Business (EBP), and Legal Purposes (ELP), each focusing on domain-specific terminology and discourse (Işık-Taş & Kenny, 2020). Critics argue that the limited scope of ESP may compromise language proficiency in general; yet, its effectiveness in meeting learners' urgent need is its principal advantage.

The significance of ESP in accentuating specialized language requirements is marked by Algeria's linguistic environment. Post-independence, French and Arabic were the primary languages in education, science, and healthcare in higher education. However, modern policies are progressively promoting English to satisfy global economic demands (Khelloul & Benmaghrouzi, 2020, Rouabahn 2022, Rouagh, Idri & Assassi, 2025). This strategic transition is prominently evident in government-initiated curricular reforms in higher education (Mahi, 2024), especially through the integration of English as the principal foreign language in educational curriculum since 2022. The move signifies Algeria's overarching objective to enhance worldwide competitiveness, since English has gained prominence in scientific and technological fields, eclipsing French as the primary language of research (Mounnes & Fethi, 2024). Beyond academic settings, English literacy is increasingly acknowledged as crucial for economic advancement and employability; yet, implementation issues remain (Mehdaoui & Benabed, 2024).

The execution of ESP in Algeria encounters significant obstacles across multiple facets. Recent studies identified three primary hurdles that hinder ESP's capacity to meet the

professional communication needs of essential industries, including health, engineering, and business. That is, deficiencies in curriculum design persist across multiple fields. Djaileb (2018) observes that ESP resources in medical education frequently lack authentic medical communication scenarios. Aliouche and Nesba's (2024) study on business English indicates a notable divergence between classroom education and the communication demands of the corporate sector. The systemic challenges in program development undermine the practical significance of ESP.

The absence of specialized teacher preparation programs poses considerable pedagogical difficulties. Boudersa (2018) demonstrates that most ESP educators transition from teaching general English without adequate preparation for discipline-specific training. This problem is particularly evident in technical fields; Soulimane-Benhabib's (2024) analysis of engineering curricula underscores the challenges educators encounter in aligning global technical communication standards with local educational requirements.

Third, motivational and economic considerations substantially impact the efficacy of ESP. Mehdaoui and Benabed (2024) examine the work market, indicating that students in Algeria recognize little economic advantages linked to English competence in the Francocentric employment sector. This perception is bolstered by the established position of French as a language associated with career prospects and social esteem, a conclusion robustly corroborated by recent empirical studies on Algerian linguistic practices (Chennouf & Abdelhamid, 2025). Aliouche and Nesba (2024) illustrate that French hegemony in commercial sectors diminishes the perceived worth of English language proficiency.

The interconnected challenges of curricular inadequacies, teacher training deficits, and motivational obstacles together impede the advancement of ESP in Algeria. Extensive adjustments are essential to resolve these concerns.

Notwithstanding the persistent structural problems in Algerian ESP programs, innovative instructional strategies, particularly multimodality, provide prospective remedies to these constraints. The integration of varied meaning-making materials can help bridge gaps in curriculum design and student engagement by moving beyond traditional text-focused ESP training.

1.3. ESP in Medical Education

The principles of ESP are particularly pertinent in medical education, where customized language training is crucial to meet the distinct requirements of healthcare professionals (PRFU, 2023). Research underscores the imperative for specialized curriculum that equip medical students with discipline-specific terminology, patient communication techniques, and comprehension abilities pertinent to clinical and academic settings (Melnychuk & Артеменко, 2025). This training fosters international collaboration and patient-centered care while tackling systemic difficulties, including cultural hurdles for non-native speakers and the incorporation of technology in course design (Zaman, 2024). Contemporary approaches advocate for blended learning and learner-centred resources that prioritize cultural relevance and adaptation to improve outcomes (Sakti et al., 2024). These initiatives highlight ESP's dual role in medical education: overcoming linguistic obstacles and preparing students for the evolving demands of global healthcare.

2. Multimodality

Jewitt et al. (2016, p. 2) define multimodality as the employment of "multiple means of meaning-making." In ESP contexts, this encompasses not only language modes but also visual, aural, spatial, and digital resources (e.g., infographics in medical ESP, simulation films in engineering ESP). The discipline fundamentally relies on two theoretical frameworks: Halliday's Systemic Functional Linguistics (SFL), which examines the contextual functions of language (Halliday & Matthiessen, 2014), and Kress and Van Leeuwen's Multimodal Social Semiotics, which provides a framework for analyzing the interplay of various modes in meaning-making (Kress & van Leeuwen, 2001). Contemporary scholars continue to apply and

develop these foundational principles in new contexts (Jewitt et al., 2016; Diamantopoulou & Ørevik, 2022).

The integration of multimodality in education has profoundly altered language teaching approaches, influencing both classroom resources and broader educational frameworks. Digital technologies are altering communication practices, prompting learners to interact with and create multimodal texts, thus redefining traditional literacy boundaries (Diamantopoulou & Ørevik, 2022). This transition substantiates the assertion that a multimodal approach is essential for a thorough comprehension of English (2022, p. 7), particularly in ESP, where communication within disciplines often amalgamates verbal, visual, and technical components. Implementing multimodality necessitates systemic transformation, encompassing a reassessment of teacher training to integrate multimodal literacies, a curriculum redesign to prioritize mode integration, and the development of assessments that evaluate students' ability to synthesize diverse semiotic materials. This methodology for ESP can be applied for EMP and could proficiently cope with Algeria's issues, such as curricular inflexibility and teacher readiness. To do so for EMP, fostering genuine, contextually pertinent learning experiences that align with the requirements of professional medical communication can be considered.

2.1.1. Multimodality in ESP

The application of multimodal pedagogy in ESP surpasses theoretical constructs (Laadem, & Mallahi, 2020). This implies emphasizing actual classroom techniques that stress the communication needs particular to diverse fields. This method employs many semiotic modalities, such as visual, auditory, and kinaesthetic, to link language education with professional application. Recent studies underscore its revolutionary potential when executed strategically.

The incorporation of technology is crucial, as digital tools like interactive films and virtual reality simulations (Rahmanu & Molnár, 2024) promote immersive learning environments in fields such as healthcare (Iqbal et al., 2024) and engineering (Wilkerson et al., 2022). The implementation of such intelligent applications markedly enhances student engagement and promotes personalized learning, which are essential components of effective ESP training (Hadj Amar, 2025). The amalgamation of these resources with genuine professional materials (Shamsitdinova, 2024) allows learners to engage with language in contextually pertinent situations that mirror workplace demands.

The advancement of multimodal literacies is equally essential. ESP training presently prioritize linguistic competency and visual literacy, enabling students to analyse technical infographics (Espinoza, 2023) and cultivate interactive listening skills for critical professional dialogues (Shamsitdinova, 2024). These competencies align with the collaborative dynamics of modern workplaces, where communication increasingly relies on hybrid digital formats.

Multimodal ESP pedagogy substantially integrates ideas of learner-centered education. Encouraging learners to leverage their multilingual capabilities and create meaning through several modalities (Archer, 2022) fosters engagement and cultural affirmation, which is especially significant in Algeria's multilingual environment. Realizing this potential requires identifying and addressing structural impediments, including insufficient teacher training in multimodal techniques and inequities in access to technical resources among institutions. The challenges stress the need for targeted professional development to properly leverage the benefits of multimodality in ESP training.

2. Project-Based Learning

Multimodality can revolutionize ESP pedagogy by facilitating integrated meaning-making, integrating its principles with project-based learning (PBL) (Kakoulli-Constantinou, 2021), an instructional paradigm that prioritizes authentic, real-world problem-solving (Beckett, 2024). Project-Based Learning (PBL), derived from Kilpatrick's early 20th-century "Project Method" (Condliffe et al., 2017:02), employs this approach by engaging learners in competency-oriented assignments structured as collaborative projects (Thomas, 2000). Like multimodal ESP instruction, PBL transcends conventional classroom boundaries. That is, while multimodality

improves students' communication through diverse semiotic resources (Bezemer, & Kress, 2015), PBL redefines the purpose of communication by embedding language use within discipline-specific challenges that mirror professional contexts.

The research conducted by Kristianto and Harendita (2022) emphasizes this relationship. Their research indicates that PBL improves language ability by engaging students in contextual English tasks, positioning with the objectives of ESP and professional communication. The collaborative development of a multimodal technical report, including text, diagrams, and presentations, by engineering students enhances their linguistic skills and discipline knowledge. This dual focus tackles enduring challenges in Algerian ESP: the emphasis on authentic activities in PBL alleviates curriculum rigidity, while its collaborative aspect enhances motivation by affirming English as a means to achieve concrete results (Mehdaoui & Benabed, 2024).

DDL is a pedagogical paradigm that, in conjunction with multimodal and project-based learning concepts, enables learners to identify linguistic patterns from actual language data included in digital corpora (Boumediene, 2025). Under the guidance of DDL, students employ resources such as the Corpus of Contemporary American English (COCA) and Sketch Engine to examine persistent lexical patterns and grammatical structures, advancing from intuition-based instruction to cultivate an advanced comprehension of specialized language usage (Boumediene, 2025). This approach is very efficacious for understanding domain-specific compound nouns and collocations, as evidenced by the analysis of terminology in pedagogy and psychology. Although DDL presents transformative possibilities for ESP by connecting theoretical understanding with practical implementation, its adoption encounters obstacles, including insufficient teacher training and the necessity for more accessible technologies (Boumediene, 2025).

II. Methodology

II.1. Research Framework and Context

This study utilized a mixed-methods approach, combining quantitative and qualitative data to investigate the English language requirements and learning preferences of second-year medical students at the University of Bejaia. The mixed design was selected to enable methodological triangulation (Creswell & Plano Clark, 2018), so facilitating a comprehensive examination of the learners' linguistic requirements and their viewpoints on multimodal education. Quantitative data were collected through standardized surveys, while qualitative insights were obtained from open-ended responses and student comments.

The study was conducted during the 2023–2024 academic year at the Faculty of Medicine, where English is required as an essential part of the second-year curriculum. The program focuses on medical terminology, human anatomy, and physiology, instructed for 1.5 hours weekly by an ESP specialist. This pilot phase serves as an exploratory component of a larger, longitudinal endeavor scheduled for the 2024–2025 academic year.

II.2. Population and Sampling

The study population comprised roughly 120 second-year undergraduate medical students participating in the English module. Forty students were first selected using simple random sampling to guarantee representativeness in terms of gender and skill levels. A total of 32 valid replies were collected, indicating an 80% response rate.

Participation was wholly voluntary, and no academic rewards were offered. Demographic characteristics including age, gender, native language, and duration of English study were gathered to contextualize participants' responses.

The sample size is suitable for a pilot study, as advised by Johanson and Brooks (2010), facilitating preliminary evaluation of instruments and procedure validity before the main study.

II.3. Research Instrument: Design and Validation of the Questionnaire

Data were collected by a self-administered questionnaire created by the researchers, based on established needs-analysis frameworks in ESP (Hutchinson & Waters, 1987; Dudley-Evans & St John, 1998). The 20-items questionnaire is divided into four sections:

Background Information (4 items): demographic and linguistic attributes;

Current Status (11 items): self-evaluated proficiency, task intricacy, and course evaluation;

Target Situation (2 items): favoured medical content and valued linguistic competencies;

Learning Requirements (3 items): preferred learning methodologies and viewpoints on project-based learning.

To guarantee content validity, the questionnaire was assessed by two specialists in ESP and applied linguistics from the University of Bejaia, who appraised the pertinence and clarity of each item. Their feedback led to minor modifications in the wording and sequence of things.

A pilot pre-test was conducted with five students from the same faculty (excluded from the final sample) to assess clarity and timeliness. Reliability was assessed using Cronbach's alpha, yielding a coefficient of 0.83, indicating satisfactory internal consistency (Tavakol & Dennick, 2011).

II.4: Ethical Considerations

The study adhered to the ethical research standards established by the Research Ethics Committee of the University of Bejaia. Participants were informed of the study's purpose, confidentiality, and voluntary nature before completing the questionnaire. Informed consent was obtained electronically via Google Forms.

All collected data were managed confidentially and employed exclusively for scholarly research purposes. No identifying information was recorded. Ethical approval was secured from the Dean of the Faculty of Medicine (Reference No. FM/2023/ENG-ESP-Ethics-12).

II.5. Data Collection Procedure and Analysis

Data were collected over a three-week period (March–April 2024) using Google Forms. Approximately fifty percent of the participants completed the questionnaire during in-class sessions, supervised by the researchers to ensure procedural uniformity, while the remainder submitted their responses remotely. The average completion time was 15 minutes.

Participants were obligated to confirm their consent before proceeding to the questionnaire items. The digital format improved accessibility and diminished administrative overhead.

Quantitative data were analyzed using descriptive statistics (frequencies, percentages, means) with SPSS version 27. This study enabled the identification of common trends regarding students' proficiency, perceived difficulties, and learning preferences.

A thematic content analysis of open-ended responses was performed using Braun and Clarke's (2006) six-phase methodology. Emerging themes such as motivation, teamwork, and involvement were systematically coded and triangulated with quantitative data to ensure interpretative depth.

To enhance internal validity, the datasets were cross-validated to confirm consistency between numerical patterns and qualitative judgement. The methodological convergence produced a thorough comprehension of medical students' English language needs and their views on multimodal education.

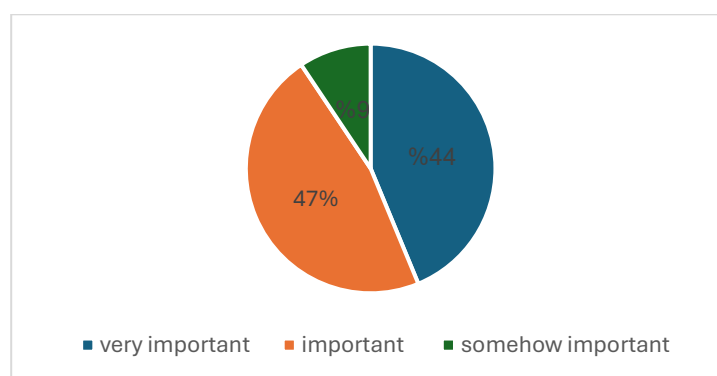
III. Results and Discussion:

This section presents the findings obtained from the participants' responses to a 20-question questionnaire, divided into four thematic sections. The first section focuses on general demographic information about the learners, including gender, age, native language, and duration of English language study after baccalaureate. The participants' responses were analyzed and categorized into four sections. The data are summarized in Table 1 below.

Table (1). Demographic Profile of Participants

Variable	Category	Frequency (n)	Percentage (%)
Gender	Female	28	87.5
	Male	4	12.5
Age	19 years	13	40.6
	20 years	15	46.9
	21 years	3	9.4
	22 years	1	3.1
Native Language	Arabic	20	64.5
	Kabyle	10	32.3
	French	1	3.2
Duration of English Study	1 year	20	62.5
	2 years	10	31.3
	8 years	1	3.1
	Self-taught (unspecified)	1	3.1

Figure (1). The Importance of English to the Students



The initial question of the subsequent part is to evaluate the students' perceptions of English language acquisition. Figure 1 demonstrates that a significant 91% of participants regard English as either "important" (47%) or "very important" (44%), whilst merely 9% assign it a comparatively lesser significance.

The second question investigates the primary reasons students deem English learning significant, permitting them to choose numerous answers from a given list. The results indicate a varied array of motivations, encompassing personal, intellectual, and professional objectives. The primary reasons, each reported by 31.3% of students, are: - Attaining fluency in English for effective communication. - Utilizing English as a means to access and understand new concepts and research in their discipline.

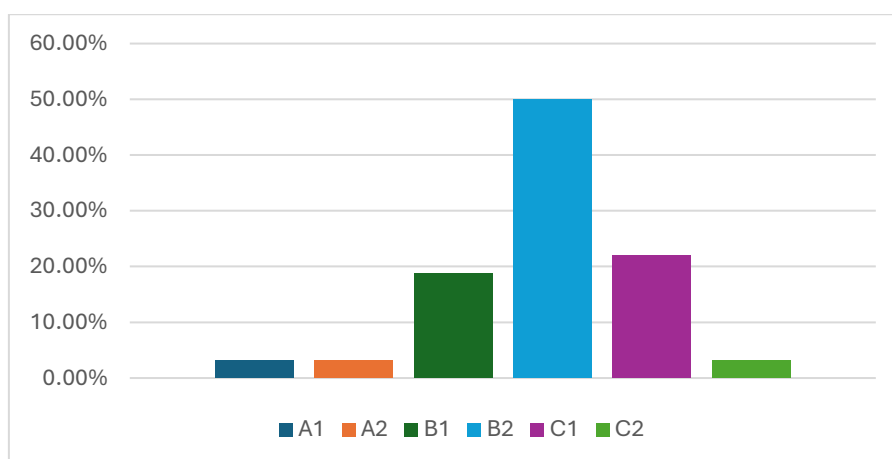
Moreover, 25% of participants underscored the language's importance for prospective employment opportunities. This indicates that pupils possess a strategic awareness of the language market. They currently function in an environment where French is esteemed for professional advancement (Chennouf & Abdelhamid, 2025), and they seem to be incorporating English as an additional valuable linguistic asset for global medical practice, while a minor subset (two students) articulated ambitions to pursue studies in English-speaking nations. Only one student explicitly intended to study and produce research papers in English, while another opted for all accessible choices, highlighting the language's diverse significance. Significantly, none of the participants regarded English solely as a mandatory prerequisite, underscoring its perceived significance beyond academic responsibility. A comprehensive analysis of answers is provided in Table 2.

Table (2). Reasons for Learning English

Reasons for Learning English	Number/Percentage
To be able to understand and talk in English fluently	10 students (31,3%)
I need it in my studies to understand new concepts, and know about new research in my domain	10 students (31,3%)
I will need it in my future career	8 students (25%)
To fulfil my studies in an English-speaking country	2 students (6,3%)
To be able to read and write research papers in English	1 student (3,1%)
It is imposed as a course and I have to take it	0
All of the above	1 student (3,1%)

The next question asks the students to rate their level of English language proficiency. The majority (50%) opted for B2, 21,9% classify themselves as C1, and 18% as B1. (See figure 2)

Figure (2). Students’ Level of English



The third question requires students to rank language skills from least to most challenging. The questionnaire results indicated clear trends in students' perceptions of the difficulty of different language skills, from the least to the most challenging. The frequency of rankings for each skill offered insights into the collective experiences of students. Reading was identified as the most accessible skill by the majority of pupils, with 9 participants assigning it the highest level (level 1). Likewise, Listening and Pronunciation were typically regarded as less challenging skills, often receiving lower rankings. The rating distribution for these skills exhibited diversity, indicating that perceptions of difficulty may vary based on individual preferences or talents. Eight students largely rated grammar as the most tough skill (Rank 7), reflecting a significant consensus regarding its difficulty. Similarly, Speaking and Vocabulary were frequently rated as more challenging, with numerous students assigning these skills rankings of 6 or 7. Notably, writing was among the most uniformly distributed skills, with no singular rank prevailing in the responses. This indicates that students' assessments of writing difficulty may exhibit greater variability than those of other skills. An analysis of the data reveals a consensus among students regarding the relative difficulty of various skills, with Reading perceived as the least challenging and Grammar as the most arduous. However, for other talents, particularly Writing and Pronunciation, perspectives are far more varied.

Table (3). Difficulties in Communicating in English

Difficulty	Frequency	Percentage
I can't express myself spontaneously	11	34,4%
I can't write texts in medical English	11	34,4%
I can't prepare an oral presentation	9	28,1%
I cannot produce texts in academic English	8	25%
I can't communicate with a patient	3	9,4%
I can't answer emails in English	1	3,1%
I don't understand spoken English	1	3,1%
I can't read a specialized text	1	3,1%

The fourth question addresses challenges in English communication. Table 3 illustrates that the predominant challenges indicated were spontaneous self-expression and composing papers in medical English, each identified by 11 participants (34.4%). The difficulties with productive skills and accurate language indicate a possible area for assistance using DDL. Boumediene (2025) illustrates that corpus tools enable students to autonomously explore the usage of specific medical terminology in authentic circumstances, transitioning from mere rote memorization to a functional comprehension of medical language.

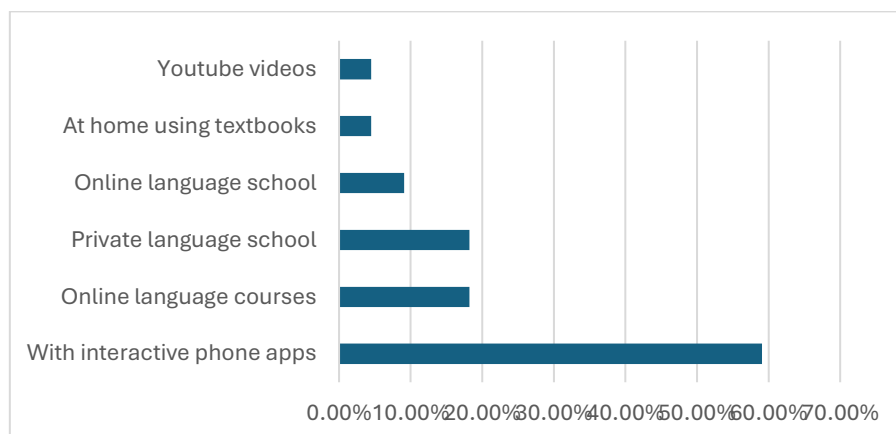
Nine participants (28.1%) similarly described the preparation of oral presentations as a burden, underscoring that productive skills (writing and speaking) constitute considerable difficulties for numerous students. Generating academic texts in English was another significant challenge, as noted by 8 individuals (25%). Conversely, a smaller number of students indicated difficulties with comprehending spoken English, interpreting specialized writings, or responding to emails in English, with each issue identified by merely 1–3 participants (3.1–9.4%). Notably, one person stated that he encounters no difficulties when conversing in English.

The fifth question inquires if people engage in English learning outside of university. A majority of students (62.5%) indicated that they acquire English skills outside their faculty, suggesting that extracurricular study significantly contributes to their language growth. This proactive strategy for language acquisition serves as a direct reaction to the perceived inadequacies of the formal educational system in addressing global linguistic needs, a phenomenon noted in several language learning situations in Algeria (Chennouf & Abdelhamid, 2025). A significant percentage (37.5%) indicated that they do not participate in English learning activities outside their academic program. This data indicates that while numerous students use supplementary resources to enhance their English proficiency, others predominantly depend on the training offered inside their educational setting.

The subsequent inquiry examines how pupils who responded affirmatively acquire English outside of the classroom. Figure 3 illustrates that the majority of these students—13 out of 22 (59.1%)—utilize interactive mobile applications to enhance their English proficiency. Alternative prevalent methods comprise online language classes and private language institutions, each selected by 4 students (18.2%), whereas online language schools were chosen by 2 students (9.1%). Several students (one each) cited alternative methods for acquiring English, including:

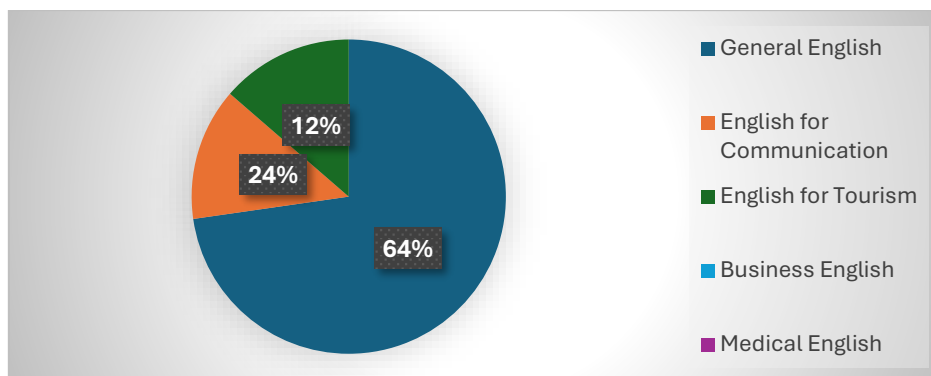
- Using textbooks
- Spending a year studying in the English Department
- Watching YouTube videos
- Teaching themselves through regular practice

Figure (3). Ways Students Learn English with.



The next pattern, which deals with Course enrollment, indicates a strong preference for General English, representing nearly two-thirds (64%) of all enrollments. English for Tourism accounts for about one-quarter (24%) of enrollments, while English for Communication comprises the remaining 12% (Figure 4).

Figure (4). English Language Course Types Enrollment



Then, the participants were asked how often they use English outside the classroom. Among the 32 respondents, 31.3% reported using English "Very frequently," while 28.1% each indicated "Frequently" and "Occasionally." A smaller proportion, 12.5%, use English "Rarely," and none reported "Never." This suggests that most students engage with English in various situations outside formal learning environments. The participants were then invited to state the situation where they use English and they answered with the following statements in Table 4:

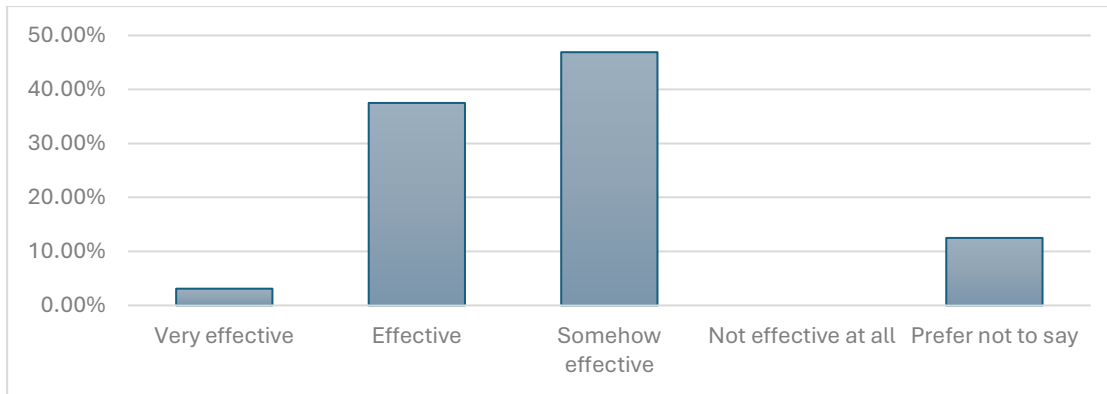
Table (4). Situations in which Second-Year Medical Students Use English

Category	Specific Situations Mentioned	Frequency
Social Communication	Chatting with my friends; Communication with friends; Texting; Talking to my friends; With a friend; With my family and friends; Sometimes when I talk with my friends	8
Research and Studying	When I research for information and find them in English; On research purposes for studies; For studying (watching videos); In research	5
Entertainment	Watching native YouTubers; Watching videos in English; Doing stuff on the internet (English); Apps; Everyday conversations about different topics	6
General Communication	Communication on social platforms; Some conversations; Friends and family; Chatting; Joking	4
Occasional Use	Just when I want to practice it I practice it with myself	1

Most participants utilize English outside the classroom mostly for interpersonal communication with friends and family, academic research, and media engagement. A limited cohort employs it for personal practice or daily tasks, although only a minority abstains from using English entirely. Undoubtedly, English holds significant importance in these students' life for social interaction, academic pursuits, and online engagements.

The final question in section two challenges the students to assess the current English course in which they are participating. Figure 5 illustrates that the predominant portion of respondents (46.9%) perceive the current English course as "Somewhat Effective." A substantial percentage (37.5%) considers it "Effective," whereas 12.5% opted for "Prefer Not to Say." Only one participant selected "Very Effective," while no participants evaluated the course as "Not Effective at all."

Figure (5). Students' Evaluation of the Current English Course



The 'Target Situation' portion comprises two enquiries. The initial question necessitates that participants choose many options from a list of medical fields they desire to be incorporated into a forthcoming medical English course. Table 5 indicates that the highest priority area is General Medical Terminology, chosen by 78.1% of the respondents. Other well-regarded domains are Anatomy and Physiology (68.8%) and Diseases and Conditions (65.6%). Categories including Medications, Procedures, Treatments, Professional Communication, and Medical Documentation each received 56.3% of replies. Explaining Diagnoses and Specialized Vocabulary were chosen by 37.5% and 40.6%, respectively, whilst History Taking was the least favored, with only 21.9% selecting it. The results underscore the participants' preference for essential medical terminology and communication abilities.

Table (5). Areas to Include in Medical English Course

Areas in Medical English	Number of Responses (n=32)	Percentage (%)
General medical terminology	25	78.1
Anatomy and physiology	22	68.8
Diseases and conditions	21	65.6
Medications, procedures, and treatments	18	56.3
Professional communication	18	56.3
Medical documentation	18	56.3
Specialized vocabulary	13	40.6
Explaining diagnoses	12	37.5
Giving instructions	12	37.5
History taking	7	21.9

The second question determines the abilities that students consider most essential for the course. Table 6 illustrates that Oral Expression is the most pivotal talent, with 87.5% of respondents identifying it as such. This was closely succeeded by Terminology (71.9%) and Pronunciation (65.6%), highlighting the importance of verbal communication and specialized vocabulary in medical contexts. Listening Comprehension and Written Comprehension were considered moderately significant, selected by 50% and 46.9% of participants, respectively. General Vocabulary had marginally lower prioritization (43.8%), whilst Written Expression (25%) and Grammar (18.8%) were the least prioritized, indicating that these elements may be of secondary importance in course design.

Table (6). Student-Prioritized Skills for English Course Focus

Skill	Number of Responses (n=32)	Percentage
Oral Expression	28	87.5%
Terminology	23	71.9%
Pronunciation	21	65.6%
Listening Comprehension	16	50%
Written Comprehension	15	46.9%
General Vocabulary	14	43.8%
Written Expression	8	25%
Grammar	6	18.8%

The last section ‘Learning Needs’ involves four questions. The first question invites the participants to select more than an option in a list of methods they prefer to learn English with. Table 7 shows how students prefer to learn English, with videos being the most popular choice (75%), followed by games and puzzles (62.5%). Traditional methods like ordinary lecturing and printed documents are also preferred by a significant number of students. Interestingly, only a small percentage of students prefer learning through films or infographics.

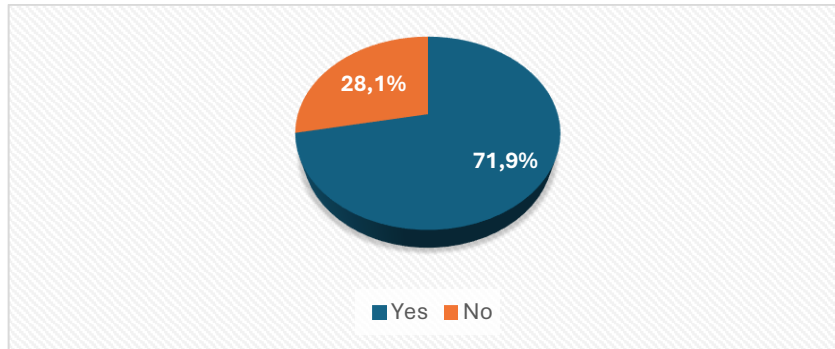
Table (7). English Learning Method Preferences

Learning Method	Number of Responses (n=32)	Percentage
Videos	24	75%
Games and Puzzles	20	62.5%
Audios	14	43.8%
PowerPoint Presentations	14	43.8%
Ordinary Lecturing	12	37.5%
Printed Documents	7	21.9%
Role-plays and Simulations	7	21.9%
Infographics	3	9.4%
By Films	1	3.1%

The next question asks the students whether they like learning by conducting projects. The pie chart (Figure 6) shows that the majority, 71.9%, answered "Yes," indicating a preference for project-based learning. Only 28.1% indicated that they do not like learning through projects.

This suggests that a significant portion of the participants find project-based learning engaging and beneficial.

Figure (6). Student Interest in Project-Based Learning



The next question asks participants to explain, in their own words, why they prefer—or don't prefer—learning through projects. Their open-ended responses were categorized into recurring themes, revealing key trends in perceived advantages and challenges. Below, Table 8 summarizes these findings, highlighting the frequency and distribution of participants' justifications.

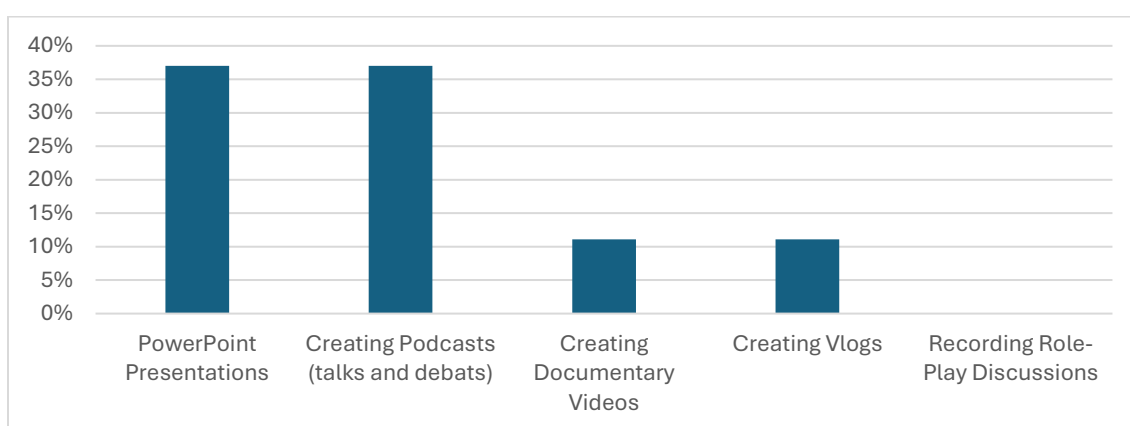
Table (8). Reasons for Liking or Disliking Project-Based Learning

Category	Response Example(s)	Frequency	Percentage
Collaboration & Communication	"It's an opportunity to talk and discuss with others."	6	24%
	"It helps develop communication skills."		
Skill Development	"To develop our skills."	5	20%
	"It helps me to develop different skills."		
Engagement & Motivation	"It's amusing."	4	16%
	"Because it is so attractive."		
Memory & Retention	"It helps to remember the work better."	3	12%
	"Easier to memorize new words."		
Autonomy & Effort	"Because I'm gonna do it by my own efforts."	3	12%
	"It pushes me to give my best."		
Confidence Building	"We gain confidence by presenting in front of classmates."	2	8%
Time/Group Constraints	"It takes a lot of time."	2	8%
	"Projects can be a source of frustration."		
No Reason Given	"Just like that."	2	8%
	"I don't know, I just like it."		

The responses disclosed a variety of viewpoints. A multitude of students emphasized the advantages of project-based learning, including heightened involvement, enhanced communication skills, and the cultivation of responsibility. Certain students explicitly said that projects enhance their English learning efficacy. Nevertheless, several students articulated apprehensions over the time investment demanded by projects and the possibility of ensuing frustration.

The third question pertains to the types of projects in which the students like to engage. Figure 7 depicts the favored project kinds across 26 participants. PowerPoint presentations and podcast creation (including lectures and debates) are each preferred by 37% of the respondents. The production of documentary videos and vlogs garnered the least choice, each at 11.1%, while filming role-play discussions was not favored by anyone.

Figure (7). Participants' Project Types Preferences



The concluding section of the questionnaire encourages participants to provide ideas or remarks regarding the English course. The replies exhibit a combination of appreciation and constructive criticism. Participants acknowledge the teacher's efforts but advocate for the implementation of more engaging and structured pedagogical approaches. Recommendations encompass the utilization of multimedia resources, the organization of classes according to difficulty levels, and the integration of old and contemporary methodologies (refer to Table 9). The student recommendations reflect ways for enhancing educational curricula by integrating emerging technology and practical applications (Hadj Amar, 2025), highlighting the significance of their comments for course reform.

Table (9). Summary of Participant Suggestions and Comments

Category	Number of Responses	Example Comments
Gratitude/Positive Feedback	6	"Thank you teacher for everything, happy to study with you."
Suggestions for Improvement	4	"Using technology is good, but I think that writing and reading are also important to develop your English."
Comments on Methods of Learning	5	"Learning English using videos, podcasts, photos, audios, films, communication is better than papers."
Neutral/General Comments	5	

The results highlight that medical students regard English competence as intrinsically linked to professional and academic achievement. The overwhelming consensus regarding its significance (91% combined "important/very important") indicates institutional recognition of English as a conduit to worldwide medical dialogue. The significant focus on conversational fluency (31.3%) and research comprehension (31.3%) reflects the dual requirements of the discipline: clinical communication and scholarship. Medical education increasingly necessitates both clinical communication skills (Chan et al., 2022) and proficiency in accessing English-dominant resources (Gvenetadze, 2022). Twenty-five percent prioritizing career preparation reinforces the perception of English as a career enhancer in medicine. The principal motivations exhibit notable consistency, however the minimal interest in specialized uses such as studying abroad (6.3%) indicates that most students perceive English primarily within immediate academic and local professional contexts. The total lack of "imposed course" responses is notably significant, suggesting that students perceive English acquisition as a professional investment rather than a curricular requirement. Fifty percent of the participants assess their English ability as B2 (upper intermediate), whereas a subset (21.9%) considers their level to be C1 (advanced). This indicates confidence in their abilities and an interest in the English language (Izidi & Zitouni, 2017). This finding is significant, as it reveals a cohort that is already proficient at traversing multiple languages, a prevalent characteristic in the Algerian multilingual context (Chennouf & Abdelhamid, 2025), and may be more amenable to incorporating an additional specialized language into their skill set.

The sense of the difficulty of language skills corresponds with recognized problems in acquiring medical English. Reading was perceived as the simplest skill, possibly because of its passive, input-oriented nature; nevertheless, grammar, speaking, and vocabulary consistently presented challenges. The significant variety in writing may indicate a mismatch in the curriculum, as noted by Scott and Guan (2024), wherein conventional educational methods do not adequately meet the special requirements of the discipline. These findings highlight two pressing priorities: (1) focused interventions for critical skills such as grammar and oral communication, which Chan et al. (2022) explicitly associate with professional effectiveness in healthcare environments, and (2) flexible writing instruction that caters to varying proficiency levels—a necessity anticipated by students' demands for practical, medically relevant resources (Scott & Guan, 2024).

The emphasis on general medical terminology, anatomy, and diseases as essential subjects underscores students' requirement for bedrock knowledge. Oral expression (87.5%), pronunciation (65.6%), and listening comprehension (50%) were regarded as highly significant skills. The skill choices indicate a distinct student inclination towards applied communication competences rather than solely academic writing skills. This corresponds with their professional focus, where clinical contacts and patient communication are prioritized over academic writing in early-career situations. Prokop and Kitura's (2023) framework underscores that practical skills cannot be divorced from foundational elements; their assertion that grammar serves as the "scaffolding for communicative competence" indicates that future course designs should integrate rather than supplant—such as instructing prescription writing through structured dialogues that enhance both grammatical precision and pronunciation. The observed inclination towards auditory/oral skills reinforces their advocacy for mixed educational methods, wherein phonetics training and medical vocabulary acquisition are integrated with situational grammar practice (e.g., delivering unfavorable news or gathering patient information). This strategy would resolve the previously identified challenges with grammar and speaking while directly addressing students' prioritized requirements.

The assessment of the existing English course indicated that the majority of students rated it as "somewhat effective" (46.90%) or "effective" (37.50%), with only one participant deeming it

“very effective.” This indicates potential for enhancement in the curriculum and pedagogical approaches. Students' feedback revealed a preference for more engaging and organized methodologies, highlighting the potential advantages of multimodal and project-based learning.

Students' pronounced inclination towards interactive approaches (films, games, puzzles) as opposed to conventional print materials underscores the increasing significance of multimodal teaching in ESP. This desire is consistent with studies on intelligent applications, which demonstrates that these tools augment interactive learning experiences and elevate student engagement by rendering the learning process more dynamic and pleasurable (Hadj Amar, 2025). This corresponds with studies indicating that multimodal settings enhance engagement by enabling learners to engage with specialized knowledge via many semiotic modes (Laadem & Mallahi, 2020; Plastina, 2013). This enthusiasm for active, discovery-oriented learning corresponds effectively with the fundamental principles of DDL, which positions the student as a researcher investigating a corpus to reveal language patterns directly (Boumediene, 2025). The noted shift reflects Beltrán-Palanques' (2023) conclusions regarding the success of contemporary ESP learners in producing "content-specific artefacts" (e.g., clinical case simulations using videos) as opposed to merely engaging with textual materials passively. Espinoza (2023) warns that this transition necessitates intentional curricular reform, such as substituting static documentation with PechaKucha-style medical case presentations to integrate visual and aural learning with professional communication practices. These adjustments not only meet student expectations but also foster the multimodal literacy necessary for practical healthcare environments (Beltrán-Palanques & Edo-Marzá, 2024).

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IV. Conclusio:

The primary aim of this study was to investigate the needs of second-year medical students at Bejaia University and their attitudes towards learning English through a multimodal approach. Additionally, the research sought to identify students' language skill preferences and their challenges in learning English. By focusing on this unique context, the study contributes to understanding how pedagogical methods can be tailored to the specific requirements of medical students in non-English speaking countries, particularly in Algeria. The findings must be interpreted within Algeria's specific sociolinguistic framework, where the roles of French, Arabic, and Berber are well-defined (Chennouf & Abdelhamid, 2025). The students' strong orientation towards English for professional success demonstrates a pragmatic adaptation to global trends within this complex multilingual environment.

The findings of this study reveal that second-year medical students at Bejaia University recognize the significance of English for their academic and professional aspirations. While the students possess a range of proficiency levels, their learning needs are diverse, with a strong emphasis on improving oral expression, terminology, and pronunciation. The analysis highlights a preference for multimodal and project-based approaches to learning, with videos, games, and presentations as favored methods. However, challenges such as difficulty with grammar, spontaneous communication, and writing in medical English underscore the need for targeted interventions. The study underscores the importance of designing an English course tailored to the students' specific academic and professional contexts, integrating engaging, interactive, and practical learning strategies to foster language acquisition and long-term retention. This aligns with the global movement towards smart education, which emphasizes the use of technology to create personalized, engaging, and effective learning experiences (Hadj Amar, 2025). However, successful implementation must also address the noted challenges, such as the need for adequate teacher training and technological infrastructure. Future research and curriculum development should explore the integration of DDL approaches, using corpus tools to provide students with hands-on, analytical experience with medical discourse (Boumediene, 2025). This would further enhance the alignment of language training with the empirical, real-world needs of healthcare professionals.

The findings underscore the importance of aligning English language instruction with global medical education standards to equip students with the skills needed for academic and professional success. Additionally, the study highlights the growing relevance of multimodal and project-based learning approaches in modern education. While the study provides valuable insights, it is limited by its small sample size and single-institution focus. Future research could explore similar needs among medical students in other universities or test the effectiveness of multimodal and project-based English curricula. Expanding the scope of research can provide

a more comprehensive understanding of how to enhance English language instruction for medical students globally.

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