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English Language Needs of Student Entrepreneurs in Startup-Based Master's Dissertations: An ESP Needs Analysis

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ABSTRACT: *The growing importance of students' English language abilities in the process of startup creation has been caused by the increasing role of entrepreneurship in higher education. The elaboration of the master's dissertations based on startups in Algeria has introduced new communicative needs that go beyond usual academic standards. This study examines the English language demands of master's students who are working on startup-based dissertation projects according to the needs analysis theory of English for Specific Purposes (ESP). The study also explores the gaps between the language skills required for entrepreneurship and the current language competency of the students. This study adopted a convergent parallel mixed methods design. The quantitative data were acquired by a questionnaire distributed to 50 masters students from different Algerian universities. The qualitative data were collected through semi-structured interviews with 11 student entrepreneurs. Descriptive statistics and thematic analysis were used for data analysis, and findings were triangulated to provide a thorough knowledge of participants' language needs. The findings reveal that English is mostly utilized for academic research, market studies, and for getting technical knowledge. However, some obstacles were highlighted in the productive communication skills in the context of pitching startup ideas, persuading investors and jury members, presentations, usage of specialized business vocabulary, and professional document preparation. The results also showed a huge difference between the students' ability to retrieve information in English and the ability to transmit entrepreneurial knowledge successfully. The results of the study indicate that student entrepreneurs represent a special category of ESP learners with specialized communicative demands. It is recommended to create specific Entrepreneurial ESP programs including oral communication, professional writing, and startup communication assignments to foster entrepreneurial success*

KEYWORDS: English for Specific Purposes (ESP), entrepreneurial communication, needs analysis, startup-based dissertations, student entrepreneurs

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1. Introduction

Entrepreneurship has been recognized by higher education institutions as a source of innovation and economic growth. Universities have intensified their efforts in promoting entrepreneurship education and have created programs targeted at enhancing students' entrepreneurial abilities and fostering the creation of startups (Kuratko, 2016; Neck et al., 2021). This tendency has been encouraged in Algeria by the advent of startup dissertations, where university students can build entrepreneurial enterprises as an alternative to the usual master dissertations. The initiative aims are to forge a stronger connection between higher education, innovation, and economic development, encouraging students to transform academic knowledge into realistic business projects.

Along with the growing importance of entrepreneurship, English has become the language of global business, technology, and scientific communication. It is essential to obtain market information, communicate with investors and stakeholders, and promote products and services internationally. Therefore, English has become essential for entrepreneurial success. It is not only a communication tool but also a gateway to information, creativity and career prospects in entrepreneurial environments.

Increasing academic interest has been shown in the association between entrepreneurship and English language learning in higher education. Previous studies have stressed the relevance of English communication skills for business development, entrepreneurial networking and professional exchange. Research has also identified the importance of English in providing access to global resources of knowledge and in promoting employability in an increasingly internationalized world of work. However, the special linguistic needs of student entrepreneurs involved in university-based startup projects have received less attention.

The awareness of the language demands of the learners is a necessity for designing effective and appropriate language programs. Needs analysis is important to the theory and practice of ESP and provides the basis for curriculum development, course design, materials selection and assessment (Munby, 1978; Hutchinson & Waters, 1987; Dudley-Evans & St John, 1998). ESP researchers assert that language education should be based on careful study of the target scenarios, existing skills, identified gaps and learning needs of the learners. Therefore, it is very important to evaluate the language needs of student entrepreneurs to guarantee that language education appropriately supports the communication demands of entrepreneurial activity.

This study explores the English language demands of Master's students working in startup-based dissertation projects. The communicative tasks of student entrepreneurs, their English language abilities as perceived by them, and the problems they encounter while using English in entrepreneurial contexts are analyzed by existing ESP needs analysis frameworks. The study asks the following research questions:

1. What English language skills and communicative tasks are required for student entrepreneurs in startup-based master's dissertations?
2. To what extent do student entrepreneurs possess the English proficiency needed to perform these entrepreneurial tasks?
3. What gaps exist between the required English language skills and the students' current abilities in entrepreneurial contexts?

2. Literature review

2.1. English for Specific Purposes (ESP): A Needs-Oriented Approach

English for Specific Purposes (ESP) is considered as a learner-centered approach in modern applied linguistics, distinguishing itself fundamentally from English for General Purposes (EGP) (Basturkmen, 2010; Suri & Saripa, 2026). While EGP focuses on developing overall language proficiency and communication skills without a predefined target context, ESP operates as a goal oriented approach to language teaching in which instruction is designed to meet the current learner's needs for particular academic or professional contexts (Belcher, 2006; Johns & Price-Machado, 2001). Thus, ESP is not considered as a distinct variety of English, rather, it is a teaching approach guided by the language needs of learners within specific contexts (Hutchinson & Waters, 1987; Paltridge & Starfield, 2013).

The primary strength of an ESP framework lies in its effectiveness in tailoring the specific language tasks and communication practices according to the needs of learners in particular disciplines (Hyland, 2007; Swales, 1990). In modern higher education and vocational settings, general English instruction is often insufficient to meet learners' required language skills within specific contexts (Galloway & Rose, 2015; Suri & Saripa, 2026). Consequently, an ESP framework intentionally shifts the instructional focus from general grammar instruction to practical language skills, ensuring that instructional materials, classroom tasks, and evaluation criteria are tailored according to the linguistic realities of the target domain (Basturkmen, 2006; Douglas, 2000).

2.2. Needs Analysis as the Core of ESP

Needs Analysis (NA) plays a significant role in identifying the learners' needs that guide the development of curricula and syllabus design (Long, 2005; Martins, 2017). It functions as a systematic process used to determine the gap between the current language abilities of learners and their language requirements within specific academic, social, or professional contexts (Mao & Zhou, 2024; West, 1994). Seminal frameworks establish that an effective Needs Analysis must comprehensively account for two primary dimensions: target needs and learning needs (Hutchinson & Waters, 1987).

According to these standard paradigms, target needs are systematically operationalized into necessities, lacks, and wants. Necessities are what the learner must know to function effectively in the target situation, lacks are the gap between what the learner already knows and the required necessities, and wants are the learners' subjective, felt desires regarding their own learning process (Hutchinson & Waters, 1987). Concurrently, learning needs encompass the physiological, pedagogical, and motivational conditions under which the student will acquire the target language effectively (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987).

2.3. Entrepreneurship Education and the Role of English

Entrepreneurship education has played an important role in the global economic growth and innovative technologies (Ahmad & Yusof Khan, 2023; Hägg & Kurczewska, 2021). At the same time, English has become the global language of business, technology, and entrepreneurship (Ahmad & Yusof Khan, 2023; Crystal, 2003). Recently, the relationship between entrepreneurship and English proficiency has received increasing attention by researchers. Language skills are now recognized as an essential competence for entrepreneurs (Ahmad & Yusof Khan, 2023).

There are many studies that highlighted the importance of communication skills for young entrepreneurs to ensure successful international collaboration (Ahmad & Yusof Khan, 2023). English proficiency allows entrepreneurs to overcome linguistic and geographic barriers, allowing them to access international markets, attract investments, and build global networks (Ahmad & Yusof Khan, 2023; Boutillier et al., 2016). Global entrepreneurship demands mastery of specialized professional skills, such as conducting international business meetings, negotiating agreements, sending and responding to emails, and managing investor relations (Ahmad & Yusof Khan, 2023; Al-Mubaraki et al., 2014). Ultimately, high language competency significantly enhances an entrepreneur's strategic risk-taking capabilities and shapes the institutional reputation of their projects (Ahmad & Yusof Khan, 2023).

2.4. ESP for Entrepreneurship: Towards Integration

Traditional Business English curricula usually rely on general textbook tasks, grammar, and standardized activities rather than preparing learners for real business situations (Evans, 2018). These approaches often fail to adequately prepare young entrepreneurs to gain the required skills for real-world market competition (Evans, 2018; Martins, 2017). Modern pedagogical research, therefore, advocates for a paradigm shift toward an integrated, constructivist, and action-oriented ESP curriculum designed explicitly for entrepreneurship (Ahmad & Yusof Khan, 2023; Evans, 2018).

Drawing heavily from constructivist and experiential learning frameworks, this integrated approach positions the learner as an active agent constructing knowledge through hands-on, problem-solving, and project-based learning tasks (Dudley-Evans & St John, 1998; Hägg & Kurczewska, 2021). Integrating ESP directly into entrepreneurial training requires aligning linguistic objectives with real-world entrepreneurial goals and strategies (Evans, 2018). Rather than treating language learning as an isolated academic subject, the integrated model embeds English instruction into authentic startup tasks, such as formulating actual business plans, writing executive summaries, managing digital platforms, and executing live investor pitches (Cahyaningrum & Arroyyani, 2024; Evans, 2018). This integrated approach ensures the synchronous development of technical business terminology and the critical, real-time communication skills needed to survive in fast-paced market environments (Evans, 2018).

2.5. Startup-Based Learning in Higher Education

Higher education institutions globally are undergoing a profound systemic reform, moving away from passive theoretical knowledge accumulation toward applied, context-sensitive knowledge production (Benessaiah & Abdelmalek, 2025; Hägg & Kurczewska, 2021). This shift is structurally embodied by the rising implementation of Startup-Based Learning (SBL) and incubator-supported initiatives within universities (Benessaiah & Abdelmalek, 2025). A prominent example of this regulatory and pedagogical evolution is the introduction of comprehensive educational reforms, such as Ministerial Decree 1275 in public university frameworks, which explicitly promote incubator-supported startup projects as a direct alternative to conventional, theory-confined dissertations (Benchaa et al., 2024; Benessaiah & Abdelmalek, 2025).

Startup-Based Learning fundamentally redefines the role of the university within the broader national innovation ecosystem, operationalizing the Triple Helix model of university-industry-government collaboration (Benchaa et al., 2024). By mandating that final-year undergraduate or Master's graduation projects culminate in a tangible startup prototype, patent application, or an official enterprise label, higher education systems foster active problem-solving and direct socio-economic engagement (Benessaiah & Abdelmalek, 2025). The literature identifies these graduation-level startup programs as highly strategic

options (Benessaiah & Abdelmalek, 2025). They empower student-innovators to address real market gaps and develop practical business competencies instead of producing traditional academic research that remains unapplied and confined to institutional repositories (Benchaa et al., 2024; Benessaiah & Abdelmalek, 2025).

2.6. Challenges in ESP for Entrepreneurial Contexts

Despite the obvious strategic benefits of merging language training with startup development, the literature documents severe instructional, operational, and affective challenges when implementing ESP in multidisciplinary entrepreneurial contexts (Cahyaningrum & Arroyyani, 2024; Evans, 2018). Students, particularly those from non-linguistic, highly technical disciplines such as engineering, computer science, and agricultural biotechnology, frequently enter university startup incubators with highly uneven and inadequate levels of general English proficiency (Cahyaningrum & Arroyyani, 2024; Evans, 2018).

The primary operational challenges identified across recent studies center on specific productive weaknesses. First, students experience intense speaking anxiety, low self-confidence, and communicative breakdowns when tasked with delivering continuous oral presentations smoothly or defending their business models during spontaneous question and answer sessions before evaluation juries (Cahyaningrum & Arroyyani, 2024; Evans, 2018). Second, learners find it exceptionally difficult to transfer basic conversational vocabulary into highly precise, professional business and tech terminology, creating severe communication gaps during live pitching or professional negotiations with potential stakeholders (Cahyaningrum & Arroyyani, 2024; Evans, 2018). Finally, drafting formal academic-professional crossover documents (such as investor-ready business proposals, commercial summaries, or official correspondence with international suppliers) presents a major challenge due to a lack of structural writing practice in professional genres (Evans, 2018; Martins, 2017). Traditional classroom settings often fail to replicate the fast-paced, digitalized environments of modern entrepreneurship, which demand specialized digital communication etiquette, digital platform management, and persuasive public speaking skills (Evans, 2018).

2.7. Research Gap and Rationale

While existing research extensively documents the general theory of Needs Analysis and the distinct benefits of entrepreneurship education, a significant research gap persists at their direct intersection within rapidly reforming higher education systems (Ahmad & Yusof Khan, 2023). Current ESP literature heavily details English for Academic Purposes (EAP) or standard Business English for corporate employees, but remains highly limited regarding the highly localized, double-pronged linguistic needs of students navigating startup-driven graduation projects (Cahyaningrum & Arroyyani, 2024; Benessaiah & Abdelmalek, 2025).

Specifically, in contexts where institutional reforms like Ministerial Decree 1275 are actively reshaping graduation requirements, students are abruptly forced to act simultaneously as academic researchers and active business founders (Benchaa et al., 2024). There is a noticeable scarcity of empirical studies exploring how these dual-role student-entrepreneurs manage the simultaneous pressure of writing a technical academic dissertation while orally pitching a viable market prototype to external investors in English (Benchaa et al., 2024; Cahyaningrum & Arroyyani, 2024). A study by Benali Reguieg (2025) A6 reported that there are significant gaps in English language skills of students entrepreneurs in the University of Chelf under the ministerial decision 1275. The study highlighted that the lack of these skills created substantial challenges in business domains. Yet, the study explored the topic quantitatively and did not

investigate the topic from the perceptions of the startup holders qualitatively. This research gap establishes a strong rationale for a comprehensive, empirical Needs Analysis (Martins, 2017). Investigating the precise target lacks, communicative anxieties, and training preferences of this unique cohort is essential for designing targeted, integrated ESP programs that effectively support university-led economic development (Hutchinson & Waters, 1987).

3. Methodology

This study adopted the mixed methods convergent parallel design combining quantitative and qualitative data. Quantitative data were collected using a questionnaire, and qualitative data were collected using semi-structured interviews. Both types of data are given equal priority regardless which one were collected first. Quantitative data were analyzed using descriptive statistics and tools like frequencies and percentages were employed to summarize the data collected from the research participants. Qualitative data were analyzed using qualitative thematic analysis following Braun and Clark (2006) model which allows the identification and analysis of patterns within the data in a detailed way.

The participants in this study are 50 second year master students who are involved in startup-based dissertation projects across several disciplines from different Algerian Universities. All 50 participants filled the questionnaire, and 11 participants were interviewed. The sampling method for this study is convenience sampling. The research participants were selected because of their accessibility and engagement with startup-oriented dissertation projects. The choice of this sample allows to explore insights related to English language demands associated with entrepreneurial practices. The sample consisted of 28 female students (56%) and 22 male students (44%). Participants represented a relatively young population, with ages ranging from 20 to 34 years. To ensure diversity and enhance the representativeness of the study, participants were recruited from a wide range of Algerian higher education institutions. Students from 30 universities and higher education institutions participated in the study as follows:

Region	East	Number of participants	Middle	Number of participants	West	Number of participants
University	Skikda	03	Bejaia	03	Oran 2	01
	Guelma	01	Khemis Miliana	07	USTO	01
	Annaba	03	Algiers 2	01	Béchar	01
	Batna 1	01	Ghardaia	01	Oran 1	02
	Biskra	01	Chlef	02	Saïda	01
	Constantine 2	01	USTHB	02	Tlemcen	02
	Constantine 1	02	Tiaret	01	Sidi Bel Abbès.	01
	El Tarf	01	Djelfa	01	Mostaganem	01
	Sétif 1	02	UFC	01	/	/
	Batna 2	01	ENSJSI	01	/	/
	/	/	Tizi Ouzou	02	/	/
	/	/	Boumerdès	02	/	/
Total	10	16	12	24	08	10

Table 01. Distribution of the Research Participants Across Universities and Higher Education Institutions

The participants also represented diverse academic backgrounds. Their fields of study included engineering, computer science, economics, management sciences, finance, biotechnology, agronomy, biology, communication, journalism, psychology, and English as a foreign language. Concerning the project development status, 38% of the research participants were at the idealization or early stage of their startup projects, and were still developing their dissertations. A further 36% reported that their projects had entered the incubation stage and that they were working on prototypes. The remaining participants were at advanced stages and preparing for their final dissertation defense. This diversity would help to identify the language needs of the students at all stages of the project.

As a starting point of the data collection stage, the research participants were asked to self-rate their overall English proficiency using four proficiency categories: Beginner, Intermediate, Upper-Intermediate, and Advanced. The majority identified themselves as having an intermediate level of English proficiency (38%), followed by beginners (32%), upper-intermediate learners (18%), and advanced users (12%). These self-reported proficiency levels provided an important basis for examining the relationship between entrepreneurial communication demands and students' perceived language abilities.

An information sheet that explains the research process was given to the research participants. A signed consent form that declares their agreement to take part in the study was obtained from them. The real names of the research participants were kept anonymous throughout all stages of the study. The participation in this study is voluntary. The research participants have the right to withdraw from the study at any stage until the data are made anonymous. The study would not cause any physical or emotional harm to the research participants.

4. Findings

4.1. Findings from the Questionnaire

4.1.1. Participants' Self-Rated English Proficiency

English Proficiency	N	%
Advanced	6	12.0%
Beginner	16	32.0%
Intermediate	19	38.0%
Upper-Intermediate	9	18.0%

Table 2. Participants' Self-Rated English Proficiency

The table presents the participants' self-assessment of their general English proficiency. The findings showed that most of the respondents considered their English proficiency to be at the intermediate levels. Specifically, 38.0% of the participants (n = 19) reported an Intermediate level and 18.0% (n = 9) reported an Upper-Intermediate level. Together, these two categories constitute more than half of the sample (56.0%), implying that the majority of student entrepreneur respondents have some level of functional English skills that allow them to engage to some extent with academic and professional materials. However, a large proportion of the respondents (32.0%, n=16) self-rated as Beginners which means that almost a third of the respondents perceive their English skills as limited. On the other hand, only 12.0% (n = 6) of participants viewed themselves as Advanced users of English. This comparatively low percentage of advanced users reflects the fact that a high level of English proficiency is still not widespread among the participating student entrepreneurs in this study.

In summary, the results show a moderate level of proficiency, since most of the participants are at beginner and intermediate levels but not at advanced levels. This is especially relevant if we take into account the entrepreneurial nature of their projects, which usually involve dealing with English-language resources, international markets, technical documents, professional networking and communicating with potential investors or partners. The small percentage of advanced English speakers might suggest some difficulties in carrying out complicated entrepreneurial communication tasks that demand specialized vocabulary, persuasive communication abilities and fluency in professional interactions.

4.1.2. The Frequency of Pitching Startup Projects to Investors or Evaluation Juries

Frequency	N	%
Never	15	30.0%
Rarely	11	22.0%
Sometimes	10	20.0%
Often	6	12.0%
Very Often	8	16.0%

Table 3. Pitching Startup Projects to Investors/Juries

The results show that most of the respondents do not have regular pitching activities. The most populous group of respondents indicated they never pitch their startup projects (30.0%, n = 15), while 22.0% (n = 11) reported that they rarely take part in such activities. These categories together constitute just over half the sample (52.0%) and suggest that some student entrepreneurs have had little experience of formal pitching situations. By comparison, 20.0% of participants (n = 10) reported pitching their projects sometimes, with smaller proportions reporting doing so often (12.0%, n = 6) or very often (16.0%, n = 8). In the total sample, only 28.0% of respondents reported high participation in pitching activities. Therefore, the direct contact with investors, juries or startup evaluators is still relatively limited among the participants. The development stage of many startup projects could partially explain these results. However, the fact that a significant part of the sample has participants who pitch often suggests that entrepreneurial communication is an important part of startup development. Many of the participants are not involved in this activity on a regular basis. Thus, even a relatively small number of pitching situations can create substantial language needs, particularly concerning speaking fluency, persuasion tactics, and entrepreneurship-specific vocabulary.

4.1.3. The Frequency of Writing Business Plans or Executive Summaries in English

Frequency	N	%
Never	10	20.0%
Rarely	15	30.0%
Sometimes	8	16.0%
Often	7	14.0%
Very Often	10	20.0%

Table 4. Writing the Business Plan or Executive Summary in English

The table presents the frequency of writing business plans or executive summaries during participants' start-up projects. The results show a diverse pattern of engagement in this entrepreneurial communication task. The majority of respondents reported that they rarely write business plans or executive summaries in English (30.0%, n = 15), followed by those who do not do this task at all (20.0%, n = 10). In total, half of the respondents (50.0%) reported little or no involvement in the preparation of such documents.

In contrast, 16.0% (n = 8) of respondents reported that they sometimes wrote business plans or executive summaries in English and 14.0% (n = 7) indicated that they did so often. Another 20.0% (n = 10) of participants reported that they did this activity very often. The results indicate that writing a business plan in English is not a regular activity for most student entrepreneurs. However, this may be influenced by the developmental stage of the startup projects of the participants. Early stage startup students may not be in a stage of development where formal business planning is required, whereas students in incubation or advanced stages are more likely to be working on executive summaries, business plans, or investor documents.

4.1.4. the Frequency of Corresponding via Email with Partners or Suppliers in English

Frequency	N	%
Never	18	36.0%
Rarely	4	8.0%
Sometimes	14	28.0%
Often	3	6.0%
Very Often	11	22.0%

Table 5. Corresponding Via Email with Partners or Suppliers

The table presents the frequency of e-mail communication between participants and their partners or suppliers in the context of their startup activities. The results show a mixed pattern of engagement in this professional communication task. The largest percentage of respondents did not correspond by e-mail with partners or suppliers (36.0%, n = 18). This means that more than a third of the test group has not yet undertaken this form of entrepreneurial communication. A further 8.0% (n=4) reported that they rarely undertook this task, bringing the percentage of respondents with limited experience of email communication to 44.0%. At the same time, many participants reported some level of activity in email communication in English. In particular, 28.0% (n = 14) reported that they sometimes correspond with partners or suppliers and 6.0% (n = 3) reported that they do it often. A significant 22.0% of respondents (n = 11) reported very frequent use of email for professional communication in English. These results suggest that email correspondence is not a common practice among student entrepreneurs. Moreover, the findings support the need for entrepreneurship-oriented ESP teaching on business correspondence and digital communication. Given the growing importance of email communication in entrepreneurial ecosystems, training students to write professional emails, inquiries, partnership requests, follow-up messages and communication with suppliers could enhance their ability to operate effectively in local and international business environments.

4.1.5. The Frequency of Conducting Market Research Through Reading English Reports

Frequency	N	%
Never	8	16.0%
Rarely	3	6.0%
Sometimes	8	16.0%
Often	15	30.0%
Very Often	16	32.0%

Table 6. Conducting Market Research (Reading English Reports)

The table represents the frequency of conducting market research through reading reports and information sources in English by participants. The results indicate that this is one of the most common entrepreneurial communication activities performed by the respondents. More than a third of the respondents (32.0%, n=16) reported very often performing market research, followed closely by respondents who reported doing so often (30.0%, n=15). These categories together account for 62.0% of the sample, which means that the majority of student entrepreneurs regularly use English-language materials for the purpose of their start-up projects.

On the contrary, only 16.0% (n = 8) of the participants responded that they never undertake market research using English sources and 6.0% (n = 3) said that they rarely conduct this activity. Another 16.0% (n=8) said they sometimes use English reports for market research purposes. Overall, the results suggest that the ability to obtain and interpret information in English is a regular and necessary part of entrepreneurial activity for most respondents.

The high frequency of this task shows the dominant role of English as the language of business, innovation, technology and entrepreneurship. Student entrepreneurs frequently require access to international market research, industry reports, competitor information, customer trends, technical documentation and research findings that are not always available in their native language. Thus, reading in English is an important activity in the development and validation of startups' ideas.

4.1.6. The Difficulty of Using Professional Business and Technical Terminology in English

Degree of difficulty	N	%
Not difficult at all	8	16.0%
Slightly difficult	10	20.0%
Moderately difficult	14	28.0%
Very difficult	12	24.0%
Extremely difficult	6	12.0%

Table 7. Using Professional Business and Technical Terminology in English

The table shows the participants' perceptions of the difficulty of using professional business and technical terminology in English in entrepreneurial contexts. The results show that a significant number of student entrepreneurs have problems with the use of special vocabulary, which is necessary for startup development, professional communication and industry-specific interaction. The most common answer

(28.0%, n = 14) was that the use of professional business and technical terminology I n English was moderately difficult. Also, 24.0% (n=12) found this task very difficult, and 12.0% (n=6) considered it extremely difficult. Together these categories represent 64.0% of the sample, showing that nearly two-thirds of the participants have moderate to high levels of difficulty dealing with specialized entrepreneurial and technical vocabulary.However, 20.0% of respondents (n = 10) said using professional terminology in English was slightly difficult and only 16.0% (n = 8) said it was not difficult at all. These results imply that only a relatively small number of participants are completely at ease with the use of the specialized language of entrepreneurship, of business communication and of technical domains.

These results suggest that there is a substantial lacks component in the participants' language profiles. Previous results indicated that a large number of respondents regularly work with reports, market information and professional resources in English; the present results suggest that the comprehension and use of specialized terminology continues to be a major challenge. This points to a mismatch between the communicative competence of the participants and the linguistic requirements of entrepreneurial contexts.

4.1.7. The Difficulty of Drafting Formal Academic and Professional Documents in English

Degree of difficulty	N	%
Not difficult at all	8	16.0%
Slightly difficult	3	6.0%
Moderately difficult	11	22.0%
Very difficult	16	32.0%
Extremely difficult	12	24.0%

Table 8. Drafting Formal Academic and Professional Documents in English

The table shows the participants' degree of difficulty in producing formal academic and professional documents in English. According to the data, this is a key barrier for many student entrepreneurs. 32.0% (n = 16) of the respondents said that drafting formal documents was very difficult and a further 24.0% (n = 12) described it as really tough. Both of these categories together comprise 56.0% of the sample, which implies that more than half of the participants encounter many difficulties when writing formal documents in English. In addition, 22.0% (n = 11) of participants assessed this activity as moderate difficulty and so, the percentage of respondents indicating moderate or more difficulty increased to 78.0%. Rather, only 16.0% (n = 8) reported that writing formal documents was not difficult at all and 6.0% (n = 3) found it to be slightly challenging. The results indicate that formal writing is one of the most difficult areas in the usage of English language to the participants.

4.1.8. The Difficulty of Understanding Specialized Audio and Video Content in English

Degree of Difficulty	N	%
Not difficult at all	11	22.0%
Slightly difficult	10	20.0%
Moderately difficult	12	24.0%
Very difficult	12	24.0%
Extremely difficult	5	10.0%

Table 9. Understanding Specialized Audio/Video Content

The findings from the table show the participants' perceptions of the difficulty to grasp specialized audio and video information in English. The results demonstrate a more even distribution of responses than the previous difficulty items, which suggests that understanding spoken entrepreneurial and technical topics is generally less challenging than productive communicative skills such as speaking and writing. Most respondents reported that interpreting specialized audio and video content was moderately difficult (24.0%, n = 12) or very difficult (24.0%, n = 12). Moreover, 10.0 % of the participants (n = 5) stated that this activity was very difficult. Together, the two categories constitute 58.0% of the sample, which suggests that more than half of the respondents have at least some difficulty in trying to understand specialized oral content in English. At the same time, a considerable number of participants reported lower levels of difficulty. In particular, 22.0% (n = 11) reported that it was not at all difficult to grasp specialized audio and video materials, while 20.0% (n = 10) reported that it was slightly challenging. The data indicate that a large proportion of the sample is very comfortable using multimedia resources in English, even when the material is technical or professional. This indicates that listening comprehension is a moderate issue and not a serious weakness. Compared to earlier results on oral presentations, spontaneous interaction and formal writing, it shows that participants have less difficulty in grasping specialist audio and video material. This pattern indicates that student entrepreneurs may have stronger receptive skills than productive skills. In other words, many of the participants can grasp the information given in English but find it more challenging to use the language themselves in professional and entrepreneurial contexts.

4.1.9. Participants' Self-Assessment of Speaking Skills in Presentations

Degree	N	%
Very weak	16	32.0%
Weak	8	16.0%
Moderate	11	22.0%
Strong	6	12.0%
Very strong	9	18.0%

Table 10. Speaking Skills in Presentations

The table presents how participants rated themselves in pitching their startup concepts in English. Data suggest that most student entrepreneurs consider their competency in this crucial entrepreneurial communication skill to be poor. Most of the respondents rated their pitching ability as extremely weak (32.0%, n = 16) and 16.0% (n = 8) rated their pitching ability as weak. These groups together account for 48.0% of the sample and indicate that nearly half of the participants are not confident in pitching their ideas in English. A further 22.0% (n = 11) of participants rated their performance as moderate, indicating a rudimentary level of competence but with considerable scope for improvement. Alternatively, 12.0% (n = 6) rated their ability to pitch as strong and 18.0% (n = 9) as very strong. Overall, only 30.0% of respondents felt that they were strong or very strong at pitching their startup ideas.

These results show the current communicating capabilities of the participants in an important entrepreneurial project. The results suggest that many student entrepreneurs do not feel sufficiently prepared to carry out one of the most important communication activities in business development. This perceived shortcoming points to a large gap between the language needs in entrepreneurial situations and the current competencies of the students.

4.1.10. The Difficulty of Persuading Investors or Jury Members

Degree	N	%
Not difficult	6	12.0%
Slightly difficult	4	8.0%
Moderately difficult	9	18.0%
Difficult	17	34.0%
Very difficult	14	28.0%

Table 11. Persuading Investors/Jury Members

The table shows the participants' perceptions of the difficulty of convincing investors, jury members or other stakeholders in English. The results show that persuasion is one of the most difficult entrepreneurial communication tasks that student entrepreneurs are facing. The largest proportion of respondents (34.0%, n = 17) reported that it was difficult to persuade others, followed by 28.0% (n = 14) who reported it was very difficult. Together, these three categories make up 62.0% of the sample, which suggests that a substantial share of the participants has major difficulties in convincing others about the value and feasibility of their startup ideas. Moreover, 18.0% of respondents (n=9) rated this task as moderately difficult, and so the proportion of participants reporting at least a moderate difficulty level was 80.0%. In comparison, only 12.0% (n = 6) thought that it was not difficult to persuade others, while 8.0% (n = 4) found it slightly difficult. These results show that persuasive communication is a big challenge for most of the participants. Thus, the participants may have sufficient English language skills to access information and understand business materials but many seem to find it hard to use language strategically to influence, persuade, and negotiate with others. This is an important distinction, because entrepreneurial communication is not just about exchanging information. It is often about persuading audiences and promoting new ideas.

4.1.11. The Biggest Language Difficulties Faced in Startup Projects

Difficulties	N	%
General Language Barrier / Low Proficiency	12	24.0%
No Significant Difficulties	3	6.0%
Professional & Academic Writing	10	20.0%
Speaking Fluency & Pitching	16	32.0%
Technical & Business Vocabulary	9	18.0%

Table 12. Language Difficulties Faced by Participants in Their Startup Project

The linguistic challenges experienced by participants in their startup companies are shown in this table. The respondents were most concerned about problems with oral communication. The most common language issues were speaking fluency and pitching for 32.0% (n = 16). This reveals that a large number of student entrepreneurs cannot describe their ideas, make convincing presentations and be involved in English-language entrepreneurial contacts. The second most common problem was language problems and insufficient English skills, reported by 24.0 % of respondents (n = 12). This means that approximately 25% of the participants feel that their English is insufficient for their entrepreneurial activity. Communication

problems can affect speaking, writing, listening and vocabulary. Further, 20.0% (n = 10) reported professional and academic writing as their worst problem. This explains the struggle students face in writing business plans, executive summaries, project reports, feasibility studies, etc. material for dissertations based on startups. The largest language problem for participants was technical and business vocabulary, reported by 18.0% (n = 9). This suggests that specialist terminology continues to be a barrier to communication in entrepreneurship.

4.1.12. Situations in Which Student Entrepreneurs Most Need English

Situation	N	%
Academic Research & Market Studies	14	28.0%
All Situations / General Everyday Use	12	24.0%
Business Communication & Correspondence	6	12.0%
Pitching, Presentations, & Explaining Ideas	8	16.0%
Reading Technical Documentation & Software	10	20.0%

Table13. Situations in Which Student Entrepreneurs Most Need English

The table presents the responses of the participants regarding the cases they feel the most need for English in the development of their startup projects. The results show that English is used for a variety of entrepreneurial and academic purposes, including needs outside of typical academic settings, such as business communication, access to technical knowledge, and entrepreneurial presentations. The largest percentage of responders (28.0%, n = 14) said they needed English for academic research and market investigations. The research indicates that English is important in providing student entrepreneurs with access to scholarly literature, industry reports, market assessments and other types of knowledge that are needed to make informed decisions and grow startups. This is consistent with prior research indicating that the most common entrepreneurial activity among the participants was to conduct market research using English reports. The second most frequently selected category was all situations/general everyday use (n=12, 24.0% of respondents). The result indicates that a large majority of student entrepreneurs consider English as a transversal skill, helping them in their academic, professional and entrepreneurial activities. For these participants English is not confined to a specific activity but is a vital instrument in the overall company development process.

Also 20.0 % (n = 10) of the respondents said that they mostly need English for reading the technical documentation and for software related publications. The finding highlights the importance of English as a language of technology, creativity and expertise. The demand for English-language technical resources seems to be a significant one for many participants, especially if we take into account the variety of startup sectors covered in the sample and particularly the technology-oriented ones. Another 16.0% (n=8) of respondents said that they need English mainly for pitching, presentations and explaining ideas. This category was selected less frequently than academic research, but it is still very important, as previous research has shown repeatedly that oral entrepreneurial communication is one of the biggest obstacles for the participants. The finding suggests that while fewer participants report presentations and pitching as their main context of English use, those who do view it as important for communicating startup ideas and engaging with stakeholders. Finally, 12.0% of the respondents (n = 6) stated that they primarily require English for business communication and correspondence. This includes activities such as professional e-mail communication, interactions with partners/suppliers, professional networking. Nevertheless, it is still a big entrepreneurial communications need inside the startup ecosystem even if it is the smallest percentage.

These findings provide useful information about the target contexts in which English is required. The findings suggest that student entrepreneurs use English not only for entrepreneurial communication but also for gathering information, technical learning and academic study. The results confirm that entrepreneurs' language demands are complex and include receptive and productive language skills.

4.1.13. English Training Needed by Student Entrepreneurs

Training	N	%
Business English & Executive Communication	8	16.0%
General English Foundations	7	14.0%
Integrated ESP	13	26.0%
Pitching, Public Speaking & Oral Presentation	17	34.0%
Professional, Technical & Academic Writing	5	10.0%

Table 15. English Training Needed by Student Entrepreneurs

Participants' views on the best English training for startup projects are presented in Table X. The results indicate that the participants would like to receive entrepreneurial communication training, especially in the area of oral communication. Of the responses, most (34.0%, n = 17) were interested in training in pitching, public speaking, and oral presenting skills. This indicates that the participants perceive oral communication as being critical to entrepreneurial success and recognize the need to improve it. 26.0% (n = 13) chose Integrated ESP as the second most preferred. It means that many participants like a focused English training for entrepreneurship and startup growth. Respondents seem to favor a situated strategy combining entrepreneurial vocabulary, communication tasks and professional language use. In addition, 16.0% (n = 8) desired instruction in Business English and Executive Communication. In entrepreneurial contexts, professional communication skills, such as networking, negotiations, correspondence, and stakeholder relations are key. General English Foundations was the main training need for 14.0% of participants (n = 7). This suggests that some students see themselves as having language weaknesses and need wider language support before they can participate in more focused communicative tasks. Finally, only 10.0% (n = 5) expressed preference for Professional, Technical, and Academic Writing education. Although certain writing concerns were identified elsewhere in the questionnaire, the smaller number may reflect that people pay more attention to oral communication issues and entrepreneurial success.

4.2. Findings from the Semi-structured Interview

4.2.1. Theme 1: English as a Gateway to Entrepreneurial Knowledge and Global Opportunities

The findings from this study showed that English is an essential tool for student entrepreneurs to access entrepreneurial knowledge, technical information, global markets, and international stakeholders. Participants repeatedly highlighted how English provides them with access to information that is not available in Arabic and allows them to expand their entrepreneurial activities beyond local boundaries. Some participants mentioned that English was necessary to consult international sources, technical documentation, tutorials, and market information.

Excerpt 01: "Most programming languages, frameworks, technical documentation and online resources are written in English."

Excerpt 02: “English helps me to access the maximum number of useful sources, because most of the research outputs related to my project are plentiful in English.”

Some of the participants regarded English as a strategic resource for internationalization.

Excerpt 03: “English is important to market my project and reach the global market, not the local one.”

Excerpt 04: English allows me to talk to Arab communities, to Western communities, to every English speaker in the world possibly.

The findings suggest that English is not just a subject in the curriculum, but a vital entrepreneurial resource that promotes innovation, market growth, and access to specialized knowledge. In their search for information, the research participants often use English in reading technical documentation, learning new technologies, following tutorials, and studying competitors.

Excerpt 05: "I learn new technologies, understand programming errors, use development tools, and write system documentation in English."

Excerpt 06: “I use English when I watch international master classes and tutorials, when I research food safety standards."

4.2.2. Theme 2: Entrepreneurial Communication Requires Advanced Speaking and Professional Interaction Skills

The research participants reported that entrepreneurship depends a lot on communication, especially on oral communication. They reported using English to pitch start-up ideas, communicate with investors, negotiate with suppliers, present projects, network, and communicate with clients.

Excerpt 07: I need English to explain my idea of the project, to convince investors and to persuade users to use my project.

Excerpt 08: “I use it to prepare presentations for international competitions or foreign investors.

Entrepreneurial communication, therefore, does not refer to general language but requires skills in persuasive communication, professional communication, and interactive communication. The findings also revealed that the speaking skill was very important in order to communicate their ideas.

Excerpt 09: The most important skill is speaking; because it helps you formulate your ideas and communicate them.

Excerpt 10: “There are plenty of people with enough vocabulary, but unfortunately they can not speak.

Excerpt 11: “You have to be able to speak well, to communicate your ideas to people and network.

These responses indicate that oral communication is a key entrepreneurial competence.

4.2.3. Theme 3: Linguistic Barriers Create Challenges in Entrepreneurial Communication

The results revealed that while respondents appreciated the importance of English, many experienced considerable challenges in entrepreneurial communication activities. The most frequently cited challenges were presenting and pitching ideas in English, pronunciation and explaining technical concepts, and vocabulary limitations

Excerpt 12: “The most difficult things are presentations and speaking about technical ideas in English”.

Excerpt 13: “It’s stressful when I’m pitching our project to investors live because sometimes I don’t have the right business words fast enough.”

Excerpt 14: “The hardest things are speaking, pronunciation, understanding accents and differentiating synonyms.”

Some participants reported problems in communicating their thoughts accurately.

Excerpts 15: “I can’t express my ideas as they are really in my mind.”

Excerpt 16: "I find it hard to say what I want without misunderstandings arising.”

The results suggest that entrepreneurial communication is not only about knowing the vocabulary but also fluency, accuracy, and confidence. Participants also reported difficulties in communicating with people from different linguistic backgrounds.

Excerpts 17: “It’s difficult to speak to clients who speak different dialects.”

Excerpt 18: “Problems occur when you have to deal with people who don’t speak English and speak only their native language.”

This finding indicates the international and intercultural character of the entrepreneurial communication.

4.2.4. Theme 4: Language Gaps Have Direct Consequences for Startup Development

Participants provided concrete examples of how insufficient English proficiency hindered their entrepreneurial activities. The data reveal that language barriers can delay projects, impede communication, and even result in missed business opportunities.

Excerpt 19: “I lost a deal with a potential client because of poor English skills.”

Excerpt 20: “I could not explain my start-up idea to an investor because my English level was only A2 and I lost the investor.”

Excerpt 21 “I misunderstood a shipping term that a foreign delivery partner was using, and it delayed our launch several days.”

Other participants said they had trouble understanding technical documentation and product specifications.

Excerpt 22: “My inability to understand complex technical documentation in English hindered the implementation.

Excerpt 23: "I had a problem understanding the specifications for baking equipment on an international website and this delayed my purchase."

These findings reveal that language deficiencies are not merely academic problems, but have practical entrepreneurial implications.

4.2.5. Theme 5: Need for Specialized Entrepreneurship-Focused ESP Training

The final theme identified from the data is about participants’ recommendations for language training. Almost all participants agreed that the existing university English courses could not help students to develop entrepreneurial communication skills adequately. Therefore, the participants pointed out the importance of training in business English, pitching skills, negotiation training, professional correspondence, presentation skills, entrepreneurship vocabulary, and real life communication practice.

Excerpt 24: “Training in business English, presentation skills, professional communication and technical vocabulary would be very useful.”

Excerpt 25: “I would like to be trained in business English, negotiation, official correspondence and presentation of projects to clients and investors.”

Excerpt 26: “It would be nice to practice real life business situations not just study grammar.”

Most participants felt that university English teaching is still too academically driven and not closely related to entrepreneurial life.

Excerpt 27: “University courses give us a foundation in academic English but do not prepare us for the practical language demands of entrepreneurship.”

Excerpt 28: “The university teaches us academic English, but it doesn’t teach us the language we need to run a business, or talk to investors.”

Excerpt 29: “Entrepreneurship is about practical interaction and direct engagement, not just theoretical learning.”

The results reveal a dissonance between the current teaching of language and the communicative needs of entrepreneurial activity.

5. Discussion

The results indicate a central function for English in the entrepreneurial work of students writing their master’s dissertations based on startups. The quantitative results reported that the participants use English often for market research and reading business related literature. The qualitative results, on the other hand,

also demonstrated that English was used to access scientific papers, technology advancements, online courses, professional platforms, and international business resources. Overall, the findings suggest that English is used as a communicative instrument and as a strategic resource for developing entrepreneurial knowledge and innovation. This finding is consistent with prior research on the growing use of English for entrepreneurship and international business. The entrepreneurs can enter the international market, global networks, and job opportunities by being proficient in English as discussed by (Ahmad and Yusof Khan, 2023). Moreover, Boutillier et al. (2016) argue that fluency in English can assist entrepreneurs to overcome language barriers that can be an obstacle for business development. The present findings support these expectations, since participants consistently related English to the access to knowledge necessary to create and improve their startup projects.

The findings can also be interpreted in the framework of Startup-Based Learning (SBL) which views students as active innovators who need to turn ideas into market-oriented solutions (Benessaiah & Abdelmalek, 2025). In such cases, students are expected to access worldwide sources of knowledge, many of which are available primarily in English. Therefore, English becomes a part of the commercial process, not an extra academic talent. One of the key contributions of this study is that student entrepreneurs employ English for a dual purpose. Previous studies have largely concentrated on English as medium of business communication (Ahmad & Yusof Khan, 2023); however, the present results indicate that English is utilized for both knowledge acquisition and entrepreneurial communication. This duality is particularly salient in dissertations embedded in companies, where students have to toggle between researching innovative ideas and communicating those solutions to many audiences.

The findings showed that the participants generally used English to find information but had serious problems when they needed to communicate business ideas actively. Quantitative data revealed that reading business documents and listening to spoken English were among the skills most frequently self-reported. However, participants reported encountering considerable difficulties in presenting their company ideas, expressing their initiatives clearly, convincing investors or jury members, and delivering presentations without hitches. The qualitative findings were a clear confirmation of this tendency. However, many participants reported that they could understand English texts and technical issues, but they had problems articulating their ideas eloquently and persuasively in public settings.

This gap between receptive and productive skills shows that student entrepreneurs have a partial communicative competence: enough to retrieve information but not enough to communicate in an entrepreneurial way. Participants often indicated nervousness, hesitancy, less fluency, and difficulty in structuring ideas while presenting startup plans. Some interviewees said they knew what they wanted to say but could not communicate it adequately in English during presentations or defence sessions.These findings align with Cahyaningrum and Arroyyani (2024) and Evans (2018) who found that speaking anxiety, low self-confidence, and communicative breakdowns were the primary concerns in entrepreneurship-oriented ESP contexts. According to Benali Reguieg (2025), Ministerial Decree 1275, within which student entrepreneurs operate, has serious deficiencies in their English language skills. The present study corroborates and extends these conclusions, providing qualitative evidence of the impact of deficiencies on students' ability to present, defend, and promote their startup projects.

The findings also showed that student entrepreneurs need more than just general English proficiency, they need proficiency in specific oral and written communicative genres relevant to startup growth. Quantitative data showed that participants routinely engaged in tasks such as preparing company plans, writing executive summaries, conducting market research, communicating through professional emails, and pitching startup ideas. Similarly, respondents reported problems with commercial and technical

vocabulary, professional writing, persuasive communication, and spontaneous engagement. These conclusions were strongly supported by the qualitative data. Participants also often mentioned the difficulties of developing business plans, writing executive summaries, talking to potential partners, and justifying initiatives to review panels. Others noted the challenge of using specialized jargon properly and adapting their language to professional contexts. These results suggest that dissertations focused on startups need students to work in tandem in the academic and entrepreneurial communities of discourse. These findings corroborate Evans (2018) and Martins (2017) who reported that entrepreneurial learners generally face difficulties with professional genres that contain elements of academic and business communication. The lexical issues encountered by the participants also align with Cahyaningrum and Arroyyani (2024) who suggested that students often struggle to apply their general English knowledge to specific business and technology discourse.

The results can also be read from the perspective of Startup-Based Learning. Benchaa et al. (2024) and Benessaiah and Abdelmalek (2025) state that startup-oriented graduation projects require students to acquire practical entrepreneurial competencies and meet academic criteria. The present findings suggest that this double expectation also imposes special demands on language. Student entrepreneurs are researchers, innovators, presenters, negotiators, and business developers all together. Hence, their language needs are not within the realm of normal English for Academic Purposes or Business English training. Thus, our study adds new evidence to the growing literature on entrepreneurship-oriented ESP by recognizing startup-based dissertations as a hybrid communicative environment where academic, professional, technical, and persuasive discourse meet. This situation creates a particular set of language requirements that calls for special educational attention.

The findings also highlighted the participants' perceptions about the training needed to overcome their linguistic challenges. Quantitative results indicated a considerable preference for education on pitching, public speaking, oral presentations, and integrated ESP training. Similarly, the qualitative data showed that participants preferred practical language courses that focused on authentic entrepreneurial tasks rather than traditional grammar-based training. One of the most notable results of the study is the uniformity across the many dimensions of requirements analysis. The results show a clear correspondence between the entrepreneurial tasks students need to complete, the self-perceived talents of the students, the obstacles they face, and the training they want. The participants regarded entrepreneurial communication as a vital part of startup development. They indicated significant deficiencies in carrying out entrepreneurial communication duties and then sought training specifically geared to address those weaknesses. This pattern closely reflects the Hutchinson and Waters (1987) paradigm of requirements, shortages, and wishes. The questionnaire found needs in pitching, professional communication, business writing, and presenting projects. The deficiencies were in the form of communication problems, speaking anxiousness, language restrictions, and professional writing problems.

Lastly, the language training needs of the participants were clearly reflected in their preferences for pitching-oriented and entrepreneurship-focused language training. The convergence of these three dimensions gives strong theoretical support for the veracity of the findings. The findings are also supportive of recent recommendations for the direct integration of ESP instruction in entrepreneurship education (Ahmad & Yusof Khan, 2023; Evans, 2018). Participants did not just ask for more grammar teaching or general English classes; they asked for practical training tied to real startup activities. This finding aligns with constructivist and experiential techniques promoted by Evans (2018), Cahyaningrum and Arroyyani (2024), and Hägg and Kurczewska (2021), which highlight learning through real-world entrepreneurial challenges. The present findings point to the necessity for an integrated Entrepreneurial ESP model embedded inside startup ecosystems, incubators and innovation programs,

rather than typical Business English programs that often depend upon decontextualized textbook activities. Such an approach would allow students to improve language competency while engaging in actual entrepreneurial practice at the same time. Thus, the study contributes to the existing ESP literature by empirically demonstrating that startup-based dissertations generate a unique learner profile that need specific language assistance adapted to the reality of entrepreneurial communication.

6. Conclusion

This study investigated the needs of English language for master students working on startup-based dissertations in Algerian universities. The findings showed that English is a key factor in the development of startups, notably in the areas of academic research, market analysis, access to technological resources, and communication for entrepreneurs. However, participants admitted to having quite a bit of difficulty in effectively articulating entrepreneurial ideas, due to their luck of competence in English. The major challenges were presenting the startup concepts, convincing investors and jury members, oral presentation, business specific vocabulary, and making professional papers in English. Moreover, the oral entrepreneurial communication was identified as the most pressing language need of the participants. This finding was supported by both quantitative and qualitative data and was consistent with participants' high preference for training in pitching, public speaking and presentation abilities. The results, therefore, reveal a significant gap between communication needs in entrepreneurial settings, and language skills available to student entrepreneurs. The study adds to the growing corpus of ESP research by showing that student entrepreneurs are a unique category of learners with specific language and communication demands. Results indicate that the language provided in higher education today may not be sufficient to meet the complicated communication needs of dissertation topics based on startups. Thus, there is a need for more specialized provision of ESP that directly addresses the context of entrepreneurial communication.

These findings have substantial implications for ESP curriculum design, entrepreneurial education, and higher education policy. First, the results show the importance to go beyond the standard academic English in language teaching and to integrate authentic entrepreneurial communication activities in entrepreneurship-oriented language training. For example, ESP classes for student entrepreneurs should include activities such as startup pitching, investor presentations, project defense simulations, networking encounters, business communication and professional documentation. Second, the results highlight the need of linguistic support in university entrepreneurship programs and incubation arrangements. Language training should be integrated into entrepreneurial ecosystems as startup-based studies increasingly need students to communicate with external stakeholders, not be distinct or elective. Third, the study theoretically contributes to ESP requirements analysis by showing that startup-based dissertations offer a hybrid communication environment where academic, professional, technical, and entrepreneurial discourse meet. This suggests the necessity for a more specific sort of ESP education for entrepreneurial contexts and surroundings of innovation-driven learning. Finally, the findings could offer insights to policy makers and university administrators interested in increasing the effectiveness of startup based dissertation projects. English language support targeted at boosting students' ability to express ideas, attract stakeholders, compete in entrepreneurship competitions, and connect with international knowledge networks.

Based on the results, the study recommends the following: first universities should develop unique ESP courses for student entrepreneurs with startup-based dissertation projects. Second, Entrepreneurship-oriented ESP programs should focus on oral communication skills in English, including pitching, public speaking, persuasive communication, and presentation delivery. Third, more focus should be put on the creation of terminology related to business and technical aspects of the students' startup areas. Lastely, universities should encourage multidisciplinary collaboration between language teachers, entrepreneurship

educators and startup mentors to ensure that language training is consistent with the communicative reality of entrepreneurship practice.

Finally, the sample size for this study was quite small; 50 respondents to the questionnaire and 11 semi-structured interviewers. Bigger samples would provide more generalizability, but were sufficient for an exploratory mixed methods study. The study also relied heavily on self-reports of language proficiency and ability to communicate. The participants' perceptions may not correspond fully to their actual language performance in entrepreneurial contexts. Thus, future research could include objective indicators of entrepreneurial communication skills. Third, the present study explored perceived language demands rather than effectiveness of specific pedagogic interventions. Future research can be done to investigate the effect of entrepreneurship-oriented ESP courses on students' communicative ability and entrepreneurial performance. Finally, future research could examine language needs of different types of entrepreneurs, compare students with different academic backgrounds, or examine the impact of English communication skills on the success of startups and innovation outcomes. Such studies may help to better understand the relationship between the linguistic competence and entrepreneurial development in higher education.

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