
RESEARCH ARTICLE

Exploring Interdisciplinary Team Teaching as a Pedagogical Strategy for Developing ESP Teachers' Subject Matter Knowledge

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ABSTRACT

English for Specific Purposes (ESP) has rapidly gained considerable importance due to the position of English as a lingua franca in various scientific and economic domains. This paper aims to highlight ESP practitioners' attitudes towards implementing interdisciplinary team teaching and the potential barriers that hinder its implementation in the business school at Ibn Tofail University. To achieve these objectives, a qualitative research design was adopted, and semi-structured interviews were conducted with five ESP practitioners in the business school. The study reveals that the five interviewed teachers have positive attitudes towards interdisciplinary team teaching in the business school. However, the five interviewed ESP practitioners have been reluctant to implement co-teaching, which is the highest level of collaboration and interaction between ESP practitioners and content teachers, due to personal, pedagogical, and administrative constraints.

KEYWORDS

Interdisciplinary Team Teaching; Collaboration; Constraints; Implementation

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1. Introduction

Teaching foreign languages for specific purposes is crucial in all educational contexts. For university students, proficiency in English is essential for staying up to date with the latest advancements in academic research, increasing employability, and enhancing mobility. Belhiah and Abdelatif (2016) assert that due to the global prominence of English as an international language of science and business, Moroccan authorities place great emphasis on enabling Moroccan university students to learn and become proficient in foreign languages. HM King Mohamed VI (2013) hinted that the educational language policy should be reconsidered when he pointed out that "The education sector is facing many difficulties and problems. They are mostly due to the adoption of some syllabi and curricula that do not tally with the requirements of the job market. Another reason has to do with the disruptions caused by changing the language of instruction from Arabic, at the primary and secondary levels, to some foreign languages, for the teaching of scientific and technical subjects in higher education. Accordingly, students must be provided with the necessary linguistic skills so that they may fully benefit from training courses. Moroccans should, therefore, be encouraged to learn and master foreign languages" (www.maroc.ma).

Moreover, Dr. Lahcen Daoudi, former Minister of Higher Education and Scientific Research in Morocco, emphasized on September 15, 2014, the importance of mastering the English language as a criterion for recruiting new professors in Moroccan universities, particularly in the fields of science, technology, health, management, and economics. According to Belhiah and Abdelatif (2016), English offers promising prospects for the development of scientific research in universities and provides alumni with better job opportunities. Scholars and researchers have also started to recognize the importance of the English language in the Moroccan

educational system. Ennaji (2005) argues that "English will start to seriously compete with French in the areas of education, science, and technology" (p. 114).

Despite the recognized importance of English for specific purposes in the Moroccan educational system, its implementation faces several challenges. Ennaji (1997, p. 21) demonstrates that "most ESP teachers lack serious and formal training." Additionally, the lack of appropriate materials and neglect of students' needs are also significant problems in the Moroccan context. There is a discrepancy between the skills required by employers and what is taught to students in English classes (Akhajam, 2019). Moreover, the allocated time for English is insufficient, with less than 60 hours per week allotted to each class. Akhajam (2019) notes that the lack of collaboration between ESP teachers and content teachers is also a serious constraint that needs to be explored further, with solutions sought to encourage collaboration among stakeholders, including content and ESP instructors.

To address the lack of collaboration between language teachers and subject specialists in the ESP context, Buckley (2000) recommends adopting interdisciplinary team teaching. This strategy involves pairing language teachers with subject specialists to promote language and academic skills simultaneously. However, there is a lack of research on interdisciplinary team teaching in the ESP context, particularly in Moroccan universities. Therefore, this study aims to fill this gap by exploring ESP practitioners' attitudes towards co-teaching as a pedagogical strategy to enhance language teachers' subject matter expertise. The findings of this study could provide insights into the effectiveness of interdisciplinary team teaching as a pedagogical strategy to develop language teachers' subject matter knowledge.

1.1 - The Research Questions and Purposes

The purpose of this paper is to address the research questions that have been formulated to achieve the objectives of the study. Firstly, the study aims to investigate the perspectives of ESP teachers regarding the implementation of interdisciplinary team teaching in the business school at Ibn Tofail University. This will enable ESP teachers to enhance their subject matter knowledge and expertise. Secondly, the study aims to identify potential challenges that ESP instructors may face when adopting this strategy in the business school at Ibn Tofail University. Overall, this study has two primary objectives: (1) to explore ESP teachers' perceptions of interdisciplinary team teaching in the business school at Ibn Tofail University and (2) to highlight possible constraints that ESP instructors may encounter when implementing this teaching approach.

- What are the ESP teachers' perspectives about the implementation of interdisciplinary team teaching in business school at Ibn Tofail University?
- What are the potential challenges ESP instructors may encounter if they adopt this strategy?

2. Literature Review

2.1. Interdisciplinary Collaboration

A great deal of scholars and researchers define interdisciplinary collaboration as a process where individuals or groups with different backgrounds, knowledge, and expertise work together to accomplish common goals and solve difficult problems. The fundamental objective of interdisciplinary collaboration is to promote innovation, creativity, and a holistic approach to problem-solving by leveraging the strengths and expertise of multiple disciplines. In this context, Andrews (1990) defines interdisciplinary collaboration as occurring "when different professionals, possessing unique knowledge, skills, organizational perspectives, and personal attributes, engage in coordinated problem solving for a common purpose" (p. 175). Berg-Weger and Schneider, furthermore, (1998) define interdisciplinary collaboration as "an interpersonal process through which members of different disciplines contribute to a common product or goal." (p98). In the ESP context, Chaovanapricha & Chaturongakul (2020) noted that the "collaborative method is the one in which the ESP teacher and the subject specialist collaborate on all aspects of the course - needs analysis, design, teaching and assessment - but do not actually share the classroom" (p141).

2.2. Interdisciplinary Team Teaching

Interdisciplinary team teaching incorporates a group of teachers from different disciplines working together to enhance students' performance. Stewart (2018) portrayed Interdisciplinary team teaching (ITT) as "one extreme of the teaching collaboration continuum" using a "fully collaborative model of instruction by teachers with different area specializations" (p. 144). Evans (2001) stated that a team teacher includes two teachers or more who voluntarily agreed to teach a group of learners simultaneously. The ITT teams are responsible for designing a curriculum, teaching the class and evaluating the learners. This collaboration between the language and content teachers might extend to more than one year (Jones, 2010, p. 76).

2.3. Profile of ESP teachers

ESP teachers are expected to be aware of their students' specific language needs, set learning objectives that align with their learners' academic or professional goals, select and adapt teaching materials, design lessons that correspond to their students' needs, create a learning environment that is relevant to adult learners, and assess their students' progress (Donna, 2000). However,

possessing these characteristics alone may not be sufficient for them to conduct efficient classes. Therefore, it is essential for ESP teachers to receive appropriate training and support to meet the demands of their specialized field. Ideally, ESP teachers should receive training in two areas: one that focuses on language and the other that addresses the content area of their students.

The framework proposed by Dudley-Evans and St John (1998) emphasizes the multifaceted nature of the ESP teacher's role and highlights the importance of engaging in a range of different activities to effectively facilitate language learning among students. ESP practitioners need to be teachers, materials designers, developers, researchers, evaluators, and collaborators. Due to the varied characteristics that ESP practitioners should possess, several researchers, such as Robinson (1991), and Jackson (1998), prefer the term "practitioner" instead of "teacher". To ensure that the language instruction meets the specific needs of the students, an effective ESP teacher needs to be versatile, flexible, and collaborative. In short, ESP teachers need to collaborate with content teachers as experts in the subject matter to ensure that the language instruction aligns with the content being taught.

2.4. Benefits and challenges of collaboration

Interdisciplinary collaboration between language teachers and content teachers offers numerous advantages. Firstly, such collaboration enables peer teachers to achieve greater efficiency by sharing their expertise and responsibilities (Alonso, 2014). It also provides professional development opportunities (Dove and Hongsfield, 2010) by helping teachers learn new techniques and strategies to enhance their teaching practices. Additionally, collaboration reduces teacher isolation and increases moral support (Kelchtermans, 2006). Barron (1992) further asserted that collaboration between ESP instructors and content teachers enhances interdepartmental relationships.

However, collaboration cannot be implemented without challenges. It is time and energy consuming (Jordan, 1997). Such collaboration threatens teachers' independence (Craig, 2013). It requires overcoming disciplinary obstacles and respecting other colleagues' expertise. This can be difficult for teachers from different disciplinary backgrounds who may be used to working independently and may not be familiar with seeking input from others (Friend & Cook, 2012). One of the serious issues that arises when content and language teachers collaborate is the problem of parity which means that one of the teachers is not treated equally and fairly. Language teachers are usually responsible for developing students' writing skills while content teachers are responsible for teaching subject matter knowledge. Some content specialists may fear that language teachers will prioritize teaching writing skills over teaching content, which could result in "watered-down" instruction (Crandall & Kaufman, 2002). Finally, administrative concerns namely additional costs, inconsistent communication between departments and scheduling coordination may pose real constraints for collaborators.

2.5. Dudley-Evans and St. John's framework

In general, teacher collaboration refers to the act of teachers working together to achieve common goals related to their job (Kelchtermans, 2006). It can take many forms, ranging from informal discussions to more structured and formalized co-teaching models (DelliCarpini & Alonso, 2014). Collaborative activities can vary depending on the level of involvement and responsibility of the teachers involved, as well as the formality of the collaborative structures in a particular context. In the ESP context, interdisciplinary collaboration refers to collective action undertaken by English and content area teachers to address the needs of English language learners" (Pawan & Ortloff, 2011, p.464). In this study, I opt for Dudley-Evans and St. John's (1998) as a useful guide to gauge the level of collaboration between ESP instructors and content teachers.

Dudley-Evans and St. John's (1998) framework outlines three levels of interaction between content teachers and ESP instructors: cooperation, collaboration, and team teaching.

- *Cooperation*: At this level, ESP teachers search for information about the content mainly through surveys, observations, and interviews (Hyland, 2006). They work together to share resources and information, but their teaching remains separate. Teachers may coordinate their lesson plans to avoid overlap, but they do not actively plan together. This level of collaboration can be useful for teachers who are working in the same department or grade level.
- *Collaboration*: At this stage, teachers work together to plan and deliver instruction and assess students' learning. They have shared responsibility for student learning, and they coordinate their lesson plans to ensure that they are working toward common goals. This level of collaboration can be useful for teachers who are working with students who have diverse learning needs. Dudley-Evans and St. John (1998) suggest three collaboration options. The first option focuses on developing a student's overall language skills to prepare them for any content class they may take in English in the future. The second option is about developing specific language skills needed for a particular task or project related to a content class taught in English. The third option is designed to provide additional support to students who may be struggling with English in their content classes. This can help these students succeed in their content classes and ultimately achieve their academic goals.

Team Teaching: At this level, teachers work together to plan and deliver instruction in an integrated and coordinated way. Both teachers are responsible for the learning of all students in the classroom, and they share the instructional load. This level of collaboration can be useful for teachers who are working with students who have significant learning needs, or for teachers who are seeking to implement innovative teaching strategies.

3. Methodology

3.1 Sample

In this study, the researcher adopts purposive sampling since it is useful when the researcher is keen on exploring the attitudes and perceptions of participants who have valuable information related to the research questions (Patton, 2015, p. 238). However, this technique might expose researchers to the risk of bias. Therefore, they need to take steps to ensure that their sample is representative and suitable for answering research questions. Purposive sampling is suitable for this research because it allows the researcher to select ESP teachers who work in the business school at Ibn Tofail, which enables the study to obtain rich and detailed information about their perceptions and the challenges they might face. Overall, purposive sampling is an appropriate approach for the research questions as the selected participants can provide rigorous data about their attitudes towards the implementation of interdisciplinary team teaching and any potential challenges they may encounter.

3.2 Instrument(s)

There are several data collection methods for a qualitative researcher, for example, interviews, observations, focus group discussion (FGD), and textual, and visual analysis (Gill et al., 2008). The largely used methods in the social science and education domain are interviews and focus groups (Patton, 2015). The research method used in this research is an interview with five university teachers who work in in business school at Ibn Tofail University to explore their attitudes concerning the interdisciplinary team teaching in ESP context along with the possible constraints they may face in implementing co-teaching.

According to Islam & Al-Deehani (2022), structured, semi-structured, and unstructured are the three types of interviews commonly used in qualitative research design. Cohen et al. (2007) describe the semi-structured interview as a method that enables individuals to engage in direct verbal interaction and have more detailed and comprehensive discussions. In this study, the researcher has chosen to use a semi-structured interview approach with five ESP instructors, as it is a suitable way to ensure that both the interviewer and interviewee stay focused on the topic and prevent them from digressing. This approach is also considered the most efficient method for collecting rich data. Specifically, the semi-structured interviews in this study aim to elicit data on the ESP teachers' perceptions of the implementation of interdisciplinary team teaching, as well as any potential challenges they might face when applying this pedagogical methodology.

3.3 Participants

Five ESP instructors accepted to take part in this study. Four of them are doctorate holders and one is preparing his doctorate thesis in his third year. The five ESP teachers are aged between 32 and 45 years old. Three of them have been teaching English in Moroccan public high or junior high schools. Two had the experience of teaching English in private schools and different language centres. The table below includes all the background information about the interviewees.

	Age	Academic level	Teaching experience	Gender	Place of work
Interviewee 1	36	Doctorate holder	12 years	male	Business school
Interviewee 2	40	Doctorate holder	18 years	female	Business school
Interviewee 3	32	Doctorate holder	14 years	male	Business school
Interviewee 4	39	Doctorate holder	10 years	male	Business school
Interviewee 5	30	TEFLMaster holder	5 years	female	Business school

3.4. Data collection procedures

The data collected from the semi-structured interviews will be transcribed and analysed using thematic analysis, which is widely used in qualitative research to identify patterns or themes in the data and interpret their meaning (Braun & Clarke, 2006). The analysis process will follow these steps: first, the researcher will read through the transcribed interviews to become familiar with the data. Next, the researcher will code the data by selecting segments that align with the research questions. After the codes have been identified and categorized, the researcher will organize them into themes. Finally, the researcher will explain the themes to draw conclusions about the perceptions of ESP instructors regarding the implementation of team teaching and the potential difficulties they may encounter. The thematic analysis offers a systematic and rigorous approach to investigating qualitative data that enables researchers to identify and interpret patterns in the data and draw meaningful conclusions.

4. Results and Discussion

The researcher elicits the following themes that reflect the ESP instructors regarding the implementation of interdisciplinary team teaching in business schools in Ibn Tofail.

1. **The ESP practitioners' attitudes towards the implementation of interdisciplinary team teaching in business schools at Ibn Tofail University.**

The four interviewees displayed positive attitudes towards collaboration between ESP and Content teachers due to the numerous advantages they provide language teachers with. This pedagogical methodology has the potential to improve the quality of education and enhance students' academic outcomes. Interviewee 3 stated that they used to have problems with some notions in management, but once they asked a specific subject professor, he clarified things for them, and therefore his assistance improved their expertise in teaching. Furthermore, interviewee 2 demonstrated that collaboration between the ESP and content professors enhances critical thinking skills. In the same vein, Interviewee 5 expressed that team teaching reduces their workload, stating that instead of spending hours trying to understand a text about offshoring, a message to the content teacher would provide the necessary information and save time. Interviewees 1 and 4 argued that despite the limitations of team teaching in the ESP context, this innovative methodology increases language teachers' problem-solving skills and enhances students' motivation and academic accomplishment. Therefore, this theme suggests that some ESP instructors support team teaching and see it as a viable option for improving the quality of education in business schools.

In a nutshell, the five teachers are very satisfied with the implementation of interdisciplinary team teaching as a method to enhance their subject matter knowledge. This finding is consistent with the research of Chenini and Mouhadjer (2020). Their study, which was conducted at Ghardia Business School, found that Algerian ESP teachers have a positive attitude towards interdisciplinary team teaching, provided that collaborative teachers possess personal qualities such as mutual respect and trust. Additionally, the participants in the study agreed that team teaching boosts students' motivation to learn English. This result is in line with the findings of Maletina et al. (2015), who also found that both language and content teachers can benefit from collaboration. Language teachers can develop their expertise in subject matter knowledge, while content teachers can enhance their linguistic and communicative competencies. Chenini and Mouhadjer (2020) also achieved the same result in their research.

2. **The potential barriers ESP practitioners might face when they implement interdisciplinary team teaching.**

Despite the positive attitudes of the participants towards collaboration between ESP practitioners and content professors, the majority are hesitant about teaching English courses in the presence of a subject specialist. Interviewee 2 stated that *"it's a good idea to collaborate with a content teacher, but I don't think his schedule will allow him to attend my classes."* Interviewee 3 expressed reluctance to teach the same class, saying, *"I'd love to teach my class with the assistance of a content teacher as it would add value for my students. However, having a subject specialist present in my English course may not be helpful as many of them do not have a good command of the English language, so their presence is useless."* Interviewees 1 and 4 completely rejected the idea of co-teaching with a content teacher as they feel it impacts their autonomy. They stated, *"co-teaching cannot be a useful method as teaching is characterized by independence to conduct classes as we see fit. A car is driven by one driver, not two."* However, Interviewee 5 displayed a readiness to implement interdisciplinary team teaching. She said, *"I would be delighted if a content teacher co-instructed with me. Both of us would benefit from this experience at all levels."*

Most ESP practitioners are reluctant to adopt team teaching in their classrooms due to administrative, personal, and pedagogical factors. It is obviously elicited from the interviews carried out that ESP teachers who participated in this study are very positive about all types of collaborations including co-planning, and co-assessing students' learning, yet they are hesitant to pair up with another content professor to co-instruct one class simultaneously. No one can deny that these reasons, namely, content teachers' full schedule, keeping language teacher autonomy and administrative constraints, obstruct teachers from co-teaching. However, this unwillingness to apply co-teaching can also be interpreted from a psychological perspective. ESP practitioners' egos prevent them from following the policy of open-door classrooms (Raha & Qasserras 2022). Though the target population is different from Raha & Qassera's previous study, teachers' trainees' perspective towards co-teaching, the same results are achieved that Moroccan teachers no matter what subject or level they teach are still not ready to adopt co-teaching as a method to develop their instructions. To sum up, the ESP practitioners' reluctance to adopt co-teaching can be attributed to administrative, pedagogical, and psychological reasons

ESP practitioners are often unwilling to adopt team teaching in their classrooms due to various factors, including administrative, personal, and pedagogical considerations. While interviews with ESP teachers revealed their positive attitudes towards various forms of collaboration, such as co-planning and co-assessing student learning, they remain hesitant to pair up with content teachers and co-instruct a class simultaneously. Although administrative constraints and the full schedules of content teachers pose obstacles to co-teaching, some teachers' psychological factors, such as ego, may also play a role in hindering collaboration and promoting individual autonomy.

A study by Raha and Qasserras (2022) showed that Moroccan teachers, regardless of their subject matter or level of teaching, are generally not ready to adopt co-teaching as a method to develop their instruction. This suggests that the challenges associated with co-teaching are not unique to ESP teachers but may be a more general phenomenon among educators. Therefore, teachers' reluctance to adopt co-teaching can be attributed to various factors, including administrative, pedagogical, and psychological reasons. Addressing these challenges may help to promote collaboration and enhance teaching practices in ESP and other fields of education.

It should be noted that the interviewees in this study only reported two levels of collaboration - cooperation and collaboration - as proposed by Dudley-Evans and St. John (1998). Moroccan ESP practitioners tended to engage in more superficial forms of collaboration, such as informally requesting information from content teachers. The five ESP practitioners who were interviewed reported that they had no problem with sharing information about course content and teaching approaches with content professors. They also collaborated with content teachers to design courses and assess students' learning. However, the highest level of collaboration, team teaching, which aims to create an integrated learning experience that combines language and content instruction, is not achievable for Moroccan ESP practitioners due to various personal, pedagogical, and administrative factors. Despite the potential benefits of co-teaching, it was simply not feasible within the Moroccan ESP context, given the various constraints at play.

5. Conclusion

In conclusion, interdisciplinary co-teaching, which involves pairing up an ESP practitioner and a content teacher, can benefit all stakeholders involved. ESP practitioners can enhance their subject matter knowledge, while content teachers can improve their communicative and linguistic competencies. Additionally, students can become more motivated to learn English and achieve better academic results. Most of the ESP practitioners interviewed for this research exhibited positive attitudes towards all types of collaboration and interaction. However, their interactions are currently limited to two levels: cooperation and collaboration (Dudley-Evans and St. John's,1998). Unfortunately, some ESP practitioners are reluctant to co-teach due to psychological, administrative, and personal constraints and therefore third-level team teaching is far-fetched in the Moroccan context.

While this study has provided valuable insights, it is important to acknowledge its limitations. One of the limitations is the research design that was implemented, which typically involves a small sample size. As a result, the findings may not be representative of the larger population. Additionally, the study did not include perspectives from students or content teachers, which could have provided a more comprehensive understanding of the benefits and limitations of interdisciplinary co-teaching. Including student feedback on the effectiveness of the approach could have provided insight into the practical implications of the findings. Moreover, the content teachers' point of view could have added value to this research. The limited generalizability of the findings in terms of Ibn Tofail Business School questions the validity and reliability of this study's results. Therefore, it is crucial to interpret the findings of this study with caution and to consider the potential biases and limitations associated with the research design.

Based on the limitations identified in this study, further research is needed to gain a more comprehensive understanding of the implementation of interdisciplinary team teaching. Specifically, more research is needed to explore students' and content experts' beliefs about team teaching to gain a clearer view of the effectiveness of this pedagogical approach. Methodologically, a mixed approach based on triangulation could provide more valid and reliable results to enrich the ESP domain. During the interviews conducted for this research, many participants highlighted the issue of ESP practitioner training. Therefore, more studies are needed to investigate whether ESP practitioners require preservice and in-service training. As Anthony (2007) notes, there is still ongoing debate within the ESP community about whether language teachers should also be experts in the target subject of the class (p.1). In conclusion, further research is necessary to address these important questions and to build upon the findings of this study.

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References

- [1] Akhajam, S. E. (2019). Challenges and prospects of ESP from Moroccan ELT teachers' perspectives. *International Arab Journal of English for Specific Purposes*, 1(1), 45-71.
- [2] Andrews, A. B. (1990). Interdisciplinary and interorganizational collaboration. In A. Minahan (Ed.-in-Chief), *Encyclopedia of Social Work* (18th ed., 1990suppl., pp. 175-188). Washington, DC: NASW Press.
- [4] Anthony, L. (2007, October). The teacher as student in ESP course design. In *The Proceedings of 2007 International Symposium on ESP & Its Applications in Nursing and Medical English Education* (pp. 70-79).
- [5] Barron, C. (1992). Cultural syntonicity: co-operative relationships between the ESP unit and other departments. *Hong Kong Papers in Linguistics and Language Teaching*, 15, 1-14.
- [6] Berg-Weger, M., & Schneider, F. D. (1998). Interdisciplinary collaboration in social work education. *Journal of Social Work Education*, 34(1), 97-107.
- [7] Buckley, F.J. (2000). *Team Teaching: What, Why and How*. California: Sage Publications Inc.
- [8] Belhiah, H., & Abdelatif, A. (2016). English as a medium of instruction in Moroccan higher education. In *Arab World English Journal, December 2016 ASELS Annual Conference Proceedings*.
- [9] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- [10] Chaovanapricha, K., & Chaturongakul, P. (2020). Interdisciplinary Teacher Collaboration in English for Specific Purposes Subjects in a Thai University. *English Language Teaching*, 13(5), 139-148.
- [11] Chenini, N., & Mouhadjer, N. (2020). Investigating ESP Teachers' Perceptions Towards The Possibility Of Implementing Team Teaching In Business English Courses: The Case Of ESP Teachers At The Faculty Of Economic Sciences, Commerce And Management Sciences At Ghardaia University. *مجلة الواحات للبحوث والدراسات*, 13(2), 1660-1683.
- [12] Craig, J.L. (2013). *Integrating writing strategies in EFL/ESL university contexts*. New York: Routledge.
- [13] Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.
- [14] DelliCarpini, M. E., & Alonso, O. B. (2014). Teacher education that works: Preparing secondary-level math and science teachers for success with English language learners through content-based instruction. *Global Education Review*, 1(4).
- [15] Dudley-Evans, T., St John, M. J., & Saint John, M. J. (1998). *Developments in English for specific purposes: A multi-disciplinary approach*. Cambridge University Press.
- [16] Donna, S. (2000). *Teach Business English*. Cambridge University Press.
- [17] Dove, M., & Honigsfeld, A. (2010). ESL coteaching and collaboration: Opportunities to develop teacher leadership and enhance student learning. *TESOL Journal*, 1(1), 3-22.
- [18] Ennaji, M. (1997). The ESP teacher in the private and public sectors. In E. M. Elhaddad, M. Najbi, R. Guelzim, A. Ait Ali, & I. Larbi (Eds.), *ESP in the Arab world: Reality check and prospects: Proceedings of the XVII th MATE Annual Conference* (pp. 19-22). Erfoud: Moroccan Association of Teachers of English.
- [19] Ennaji, M. (2005). *Multilingualism, cultural identity, and education in Morocco*. Springer Science & Business Media.
- [20] Friend, M., & Cook, L. (2012). *Interactions: Collaboration Skills for School Professionals* (7th ed.). Pearson.
- [21] Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*, 204(6), 291-295.
- [22] Jackson, J. (1998). Reality-based decision cases in ESP teacher education: Windows on practice. *English for Specific Purposes*, 17(2), 151-167.
- [23] Jones, P. T. (2010). *Teaching, learning and talking: Mapping "the trail of fire"*.
- [24] Jordan, R. R. (1997). *English for academic purposes: A guide and resource book for teachers*. Cambridge: Cambridge University Press.
- [25] Hyland, K. (2006). *English for Academic Purposes*, London: Routledge Taylor & Francis Group.
- [26] Kelchtermans, G. (2006). Teacher collaboration and collegiality as workplace conditions. A review. *Zeitschrift für Pädagogik*, 52(2), 220-237.
- [27] Maletina, L., Karmanova, Y. A., & Kashpur, V. V. (2015). Implication of interdisciplinary team teaching of an ESP course.
- [28] Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Los Angeles, CA: Sage.
- [29] Pawan, F., & Ortloff, J.H. (2011). Sustaining collaboration: English-as-a-second-language, and content-area teachers. *Teaching and Teacher Education*, 27, 463-471.
- [30] Robinson, P. C. (1991). *ESP today: A practitioner's guide*. Englewood Cliffs, NJ: Prentice Hall.
- [31] Raha, Y., & Qasserras, M. (2022). The Implementation of Co-teaching Model within the Moroccan TEFL Classroom-Moroccan Teachers Trainers' Perspectives. *European Journal of Education and Pedagogy*, 3(6), 103-108.
- [32] Stewart, T. (2018). Expanding possibilities for ESP practitioners through interdisciplinary team teaching. *Key issues in English for specific purposes in higher education*, 141-156