

Integrating Constructivist Pedagogy into ESP Teaching at the Algerian Higher Education: The Case of Third-year Students at Mouloud Mammeri University of Tizi-Ouzou

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Abstract

This study investigates the effectiveness of the current English for Specific Purposes (ESP) course offered to third-year students in the department of English at Mouloud Mammeri University of Tizi-Ouzou (MMUTO) and examines how constructivist learning principles can enhance its course design. Drawing on Vygotsky's (1978) social constructivism, the research explores two questions: whether the course aligns with students' academic and future professional needs, and how constructivist learning principles can be applied to improve ESP instruction.

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The Findings show that students value authentic materials, and real-life tasks, yet reveal limited opportunities to engage in collaborative projects or practice-oriented activities such as role-plays, discussions and presentations. Preference for such activities suggests a strong demand for more interactive and authentic classroom experience.

Keywords: course design, constructivist learning principles, ESP, real-life tasks, social constructivism

1. Introduction

In today's increasingly globalized world, English has firmly established itself as a vital tool for international communication, academic engagement, and professional advancement. It functions as a bridge for research, cross-border collaboration, and access to global opportunities. English proficiency is not only a valuable asset but a necessity for both students and professionals to participate in international dialogues and progress in their respective fields. In response to the growing demand for specialized language skills, English for Specific Purposes (ESP) has emerged as a practical approach to language instruction to meet learners' needs (Brunton, 2009). Brunton (2009, p. 2) states that "ESP has increased over the decades as a result of market forces and a greater awareness amongst the academic and business community that learners' needs and wants should be met wherever possible". Thus, unlike General English (GE) courses, ESP is designed to meet the particular communicative needs of specific disciplines such as business, medicine, law, and engineering, equipping learners with language skills directly relevant to their academic and professional contexts.

In Algeria, the integration of ESP into higher education is still inconsistent and underdeveloped, particularly within public universities.

Teaching ESP at Mouloud Mammeri University of Tizi-Ouzou (MMUTO) is often hampered by a lack of clear curriculum content, insufficient methodological guidance, and absence of teacher training. These challenges have led students to look for more targeted language instruction outside the university framework, often in private institutions that provide English classes tailored to particular fields.

The purpose of this study is to investigate the effectiveness of the current ESP course offered to third-year students in the Department of English at Mouloud Mammeri University of Tizi-Ouzou (MMUTO), with a particular emphasis on whether the program aligns with students' academic and future professional needs. To address this, the research adopts a constructivist approach to learning, drawing on Vygotsky's (1978) theory, which emphasizes learner-centered instruction, active participation, collaboration, and contextualized knowledge construction. The aforementioned principles closely align with the objectives of ESP, which seeks to equip learners with practical language skills related to their specific fields. By using constructivist theory in the evaluation and the design of the ESP program, this study aims to fill a gap in the literature and propose pedagogical practices that better support students' real-life language needs.

1.1 Research Significance

The significance of this research is two-fold: Theoretical and Practical. From the theoretical point of view, it contributes to the growing field of ESP instruction in relation to the constructivist theory. By relating ESP with a constructivist framework, this research emphasizes the role of learners as being active participants in constructing their knowledge instead of being passive recipients of information. In addition, as far as the Algerian context is concerned, this research bridges a gap in the existing literature,

since no studies have explored the pedagogical implications of applying constructivist principles to ESP.

From the practical point of view, the study provides valuable insights for ESP teachers, and curriculum designers in the Algerian higher education. It highlights how constructivist strategies such as presentations, role plays, collaboration and project-based learning would significantly increase the relevance and effectiveness of ESP instruction, better preparing students for their academic and professional futures. In doing so, the study supports the transition from traditional teacher-centered methods to learner-centered approaches which goes in line with the recent educational reform undertaken by the Algerian universities in order to improve the quality of ESP instruction.

1.2 Research Questions

Accordingly, the following questions are asked to guide the present research:

1. To what extent does the current ESP course offered to third-year students at MMUTO align with their academic and future professional needs?
2. How can constructivist learning principles be applied to enhance the design and instruction of ESP courses?

The general hypothesis on which the present study is based runs as follows:

In order to better meet the academic and professional needs of third-year students in the department of English at MMUTO, the current ESP course should be enhanced through the integration of constructivist learning principles such as collaboration, active participation, and contextual learning. These principles can significantly improve the relevance and effectiveness of ESP course design.

2. Review of the Literature

2.1 Constructivist Learning Theory: Principles and Implications

Constructivist theory is grounded in the works of Piaget (1973) and Vygotsky (1978). This theory is a framework that enables learners to actively construct individually (Piaget, 1973) and socially (Vygotsky, 1978) their own knowledge and skills through practical engagement in real-life activities. In this process, knowledge and skills are acquired as a natural outcome of these experiences, allowing learners to internalize and appropriate them rather than merely memorize or reproduce information (Jonassen, 1991, 1995; Tarnopolsky, 2012).

Learners construct knowledge through interaction with their environment, peers, and prior experiences, engaging in social interaction and meaningful engagement with content (Brown et al., 1989). This aligns directly with Vygotsky's theory (1978) which centers on the Zone of Proximal Development (ZPD) and focuses on the idea that learning happens best through social interaction. Emphasis is placed on the social context of learning, which encourages interaction between learners and their peers and teachers (Vygotsky, 1978). This is why cooperative learning and scaffolding are very important in the teaching/learning process because they help learners improve their overall language skills through meaningful group interaction. In simple terms, the ZPD shows that learners learn more effectively when they collaborate and engage in learning tasks within a real and supportive context.

In the context of language learning, the constructivist theory promotes learner-centered activities, authentic tasks, cooperative learning, and

reflection, all of which promote deeper understanding and learner autonomy. These principles emphasize collaboration, and engagement in real-life situations that make learning more relevant to learners' needs. In ESP classes, learners are expected to acquire language skills for specific purposes, which often involve problem-solving, project-based learning, and authentic communication. This is why constructivist learning principles should be applied in the classroom through activities such as role-plays, simulations, discussions, presentations and collaborative projects which reflect real-world situations that students are likely to meet in their academic or professional lives. By giving the learner a central role in the educational process, constructivist pedagogy can improve ESP instruction and connect classroom practices with real-world language use.

2.2 English for Specific Purposes (ESP): Definitions and Scope

English for Specific Purposes (ESP), which emerged in the 1960s, is a branch of English language teaching (ELT) that focuses on equipping learners with the specific linguistic skills they need in academic or professional contexts. According to Mackay and Mountford (1978, cited in Merine & Boulenouar, 2019), ESP is the teaching of a type of English for a utilitarian purpose to adult learners because they need it to function effectively in specific academic or professional contexts. Harmer (1983, p.01) supports this view and defines ESP as: "...situations where the student has some specific reasons for wanting to learn a language". That is to say that ESP learners study English not out of interest in the language or its culture, but they study English because they need it for academic or occupational purposes. Hutchinson and Waters (1987, p. 19) explain that ESP is "an approach to language teaching in which all decisions as to content and

method are based on the learner's reason for learning". From the quotation, it is understood that ESP is a learner-centered approach where all decisions about the content and methodology are determined by the learners' specific needs and goals. In this regard, ESP is both learner-centered and purpose-driven, which makes it particularly relevant in higher education settings where students require domain-specific language skills for academic success and future employment. ESP instruction typically follows a systematic needs analysis to identify learners' communicative needs, followed by course design and material selection that are made to meet those needs (Dudley-Evans and St. John, 1998).

Although there are many types of ESP, educationalists generally agree on the existence of two main branches: English for Academic Purposes (EAP) and English for Occupational Purposes (EOP). This distinction is based on learners' reasons for learning English, their needs and the context in which they will use the language. In other words, EAP focuses on the language skills students need in academic settings, such as writing research papers, giving presentations, or reading academic texts while EOP involves English used in professional environments, such as meetings, reports, or technical instructions (Carter, 1983). For Hutchinson and Waters (1987), the line between EAP and EOP is not always easy to draw. The reasons they put forward are that many learners study and work at the same time, and that the English they learn for academic purposes is often used later in their professional careers. As a result, both EAP and EOP share the same final goal that is to prepare learners for employment (Mérine & Boulenouar, 2019).

2.3 The Role of Needs Analysis in ESP

Dudley-Evans and St John (1998) propose a comprehensive definition of needs analysis. They explain that needs analysis is the process of establishing *what and how of a course*. Hutchinson and Waters (1987) explain that understanding learners' needs not only clarifies *what* English should be taught but also *why and how* it should be taught. Needs refer to the knowledge and skills learners must develop in order to acquire the language and to function in the target situation. Hutchinson and Waters (1987) identify two types of needs that are target needs (what the learners need to do in the target situation) and learning needs (what the learners need to do in order to learn). They further divide target needs into *necessities* which include what learners must know and be able to do in order to perform effectively in their academic or professional contexts, *lacks* which refer to the gap between what learners already know and what they still need to learn, and *wants* which refer to the learners' personal perceptions, goals, and preferences regarding what they feel they need or wish to learn.

Needs analysis is a cornerstone of effective ESP course design (Dudley-Evans & St John, 1998). It is the first step in the design process. It systematically identifies learners' linguistic, academic, and professional needs in order to ensure that course content and teaching methods are relevant and efficient. Consequently, Richards (2001) points out that needs analysis becomes an essential tool in ESP, serving as the foundation for course design that allows teachers to select the content, methodology, and assessment strategies that best serve learners' goals.

In the Algerian context, needs analysis is often absent or poorly implemented. Courses are sometimes designed based on teachers' intuition or generalized syllabi, rather than data-driven understanding of students'

needs. This gap results in courses that are not aligned with learners' academic or professional realities. In fact, effective ESP instruction requires systematic needs assessment, including both target situation analysis (the tasks learners will perform using English) and present situation analysis (learners' current language proficiency and learning conditions).

It is commonly agreed that information about the learners' needs can be collected using different data collection tools. Thus, needs analysis can be conducted through questionnaires, surveys, interviews, observations and tests, among others (Hutchinson and Waters, 1987). The data gathered may orient teachers on the learners' needs, difficulties, learning preferences and specific language skills required to perform in the target situation. In the present study, a questionnaire has been employed to determine learners' needs from a constructivist perspective.

3. Research design and method

The present investigation is based on a case study research design. A case study, as defined by Yin (2009, p.18, as cited in Priya, A. 2021, p. 95), is "an empirical inquiry which investigates a phenomenon in its real-life context. In a case study research, multiple methods of data collection are used, as it involves an in-depth study of a phenomenon." Although case studies involve the use of different tools such as interviews or observations, this investigation relies primarily on a questionnaire which still fits the case study design because it attempts to explore a contemporary educational phenomenon within its authentic setting.

The study also adopts the quantitative approach. As Dörnyei (2007, p.24) claims, the quantitative approach consists of “data collection procedures that result primarily in numerical data which is then analyzed primarily by statistical methods”. Such procedures are designed to ensure that the obtained data are unbiased and reliable (Davies, 2007). Accordingly, a questionnaire is employed to investigate the extent to which the current ESP course delivered to third-year students at MMUTO align with their academic and future professional needs and to examine how constructivist learning principles can be applied to enhance the design and instruction of ESP courses.

3.1 Participants and Context of the Study

The study is conducted in the department of English at Mouloud Mammeri University of Tizi-Ouzou (MMUTO), Algeria. The population under investigation that has been targeted is third-year students who are preparing their Licence degree in English. The selection is based on the fact that third-year students study ESP, which is an integral subject of third-year curriculum. From the whole population, a hundred (100) undergraduate students are randomly selected as participants in the study. Random sampling fundamentally relies on selecting participants according to the principles of probability and chance. It “involves selecting members of the population to be included in the sample on a completely random basis” (Dörnyei, 2007, p: 97).

3.2 Data Collection Tools

Data are gathered through students’ questionnaire which consists of six closed-ended questions, administered to 100 participants in order to obtain clear insights into the situation. The questions are designed using

Likert scale format. Each question includes a set of responses ranging from “strongly agree” to “strongly disagree”. This format allows respondents to choose a degree of agreement or disagreement with the statements. However, the “neutral” choice has been intentionally left out. The reasons behind this decision are first to encourage the participants to express and state their position clearly and second to reduce the chance of selecting it simply because they are uncertain or uninterested in the topic.

3.3 Data Analysis Tools

In the present study, the closed-ended questions of the questionnaire have been analyzed using the Statistical Package for Social Sciences (SPSS). SPSS software is widely recognized as the most commonly used tool in academic research, especially in the social sciences. It is an effective instrument for researchers to efficiently analyze and interpret qualitative data. Once the data is processed in SPSS through its various steps, the questionnaire results are displayed in the form of tables. Thus, frequencies and percentages are calculated for all questionnaire items.

4. Results

Question One: How far do you agree with the following statement “the use of real-life tasks and authentic materials in your ESP course help develop the ESP skills needed for success in my field of study or future profession”?

Table 01: Students' Perceptions on the Impact of Real-life Tasks and Authentic Materials in Developing ESP Skills.

Descriptive Statistics		Inferential Statistics					
		Chi-square Tests					
Observed	Percentage	Expected	Residuals	Value	df	Asymptotic	Sig.(p)
Participants	%						

nts			Frequen cy				
Stongl y agree	24	24.0	25.0	-1.0	120.08 0 ^a	3	.000
Agree	70	70.0	25.0	45.0			
Disagr ee	6	6.0	25.0	-19.0			
Strongl y disagre e	00	0.0	25.0	-25.0			
Total	100						

As shown in table 01, participants’ responses to the statement regarding the role of real-life tasks and authentic materials in developing ESP skills demonstrate a statistically significant distribution across agreement levels, $\chi^2(3, N = 100) = 120.08, p < .001$. A clear majority of respondents either agree (70%) or strongly agree (24%) that the integration of authentic, profession-related materials supports their ESP learning. In contrast, only a small proportion disagree (6%), and none strongly disagree. These results indicate that learners hold overwhelmingly positive perceptions of authenticity-based instruction, emphasizing their recognition of its relevance to real-world communication and professional skill development, a cornerstone of constructivist pedagogy, which promotes learning through meaningful, context-rich experiences.

Question Two: How far do you agree with the following statement: “the communicative approach can help me develop my ability to communicate effectively in ESP”?

Table 02: Students’ Responses on the Effectiveness of the Communicative Approach in Developing ESP Communication Skills

Descriptive Statistics			Inferential Statistics				
			Chi-square Tests				
	Observed Participan ts	Percenta ge %	Expected Frequen cy	Residua ls	Value	d f	Asymptot ic Sig.(p)
Stongly agree	44	44.0	25.0	19.0	71.60 0 ^a	3	.000
Agree	49	49.0	25.0	24.0			
Disagre e	7	7.0	25.0	-18.0			
Strongl y disagre e	00	0.0	25.0	-25.0			
Total	100						

The analysis of students’ perceptions of the communicative approach reveals a highly significant difference among response category, χ^2 (3, N = 100) = 71.60, $p < .001$. A large proportion of respondents agree (49%) or strongly agree (44%) that communicative teaching enhances their ability to use English effectively in ESP contexts, while only a small percentage disagree (7%) and none expressed strong disagreement. This strong

agreement shows that students clearly value interactive and meaningful ways of learning. It also suggests that using communicative methods helps them develop language skills they can apply in real-life situations related to their field of study or work which is a key aim of both ESP and constructivist teaching.

Question Three: In the classroom, do you study ESP through? (Tick just one answer)

Table 03 : Students’ used methods for studying ESP

Descriptive Statistics			Inferential Statistics				
			Chi-square Tests				
	Observed Participants	Percentage%	Expected Frequency	Residuals	Value	df	Asymptotic Sig.(p)
Discussions	41	41.0	16.67	24.33	32.83 ^a	5	.000
Role plays	14	14.0	16.67	-2.67			
Presentations	12	12.0	16.67	-4.67			
Projects	13	13.0	16.67	-3.67			
All of them	7	7.0	16.67	-9.67			
None of them	13	13.0	16.67	-3.67			
Total	100						

As presented in table 03, students’ responses regarding the way ESP is studied in the classroom are not evenly distributed across the suggested options. The statistical analysis has shown a significant Chi-square value, χ^2 (5, N = 100) = 32.83, $p < .001$, which indicates clear differences among the reported learning practices. The majority of participants (41%) say that ESP is mainly studied through discussions, a figure well above the expected frequency. In contrast, other activities such as role plays (14%), presentations (12%), projects (13%) and a combination of these methods (7%) are reported less frequently. This pattern suggests that classroom instruction in ESP tends to rely predominantly on discussion-based rather than on more varied methods.

Question Four: Would you like to study ESP through? (Tick just one answer)

Table 04 : Students’ preferences for studying ESP

Descriptive Statistics			Inferential Statistics				
			Chi-square Tests				
Observed	Participa	Percentag	Expecte		Valu	d	Asympto
nts		e%	Frequen	Residu	e	f	tic
			cy	als			Sig.(p)
Discussion	19	19.0	16.67	2.33	30.1	5	.000
s					2 ^a		
Role plays	10	10.0	16.67	-6.67			
Presentati	15	15.0	16.67	-1.67			
ons							
Projects	22	22.0	16.67	5.33			
All of	27	27.0	16.67	10.33			

them						
None of them	7	7.0	16.67	-9.67		
Total	100					

To gain insights into learners’ preferences for studying ESP, participants are asked to indicate which classroom method they would like to engage in. As displayed in table 04, the distribution of responses show a statistically significant variation, $\chi^2 (5, N = 100) = 30.12, p < .001$. A large proportion of students express a preference for studying ESP through all suggested methods (27%) or project-based work (22%), while smaller numbers favor discussions (19%), presentations (15%), and role plays (10%). Only (7%) report no preference for any method. This finding indicate that learners value a multimodal and interactive approach, reflecting their interest in diversified classroom practices that promote engagement and autonomy.

Question Five: How do you prefer to study ESP?

Table 05 : Students’ Preferences for Studying ESP

Descriptive Statistics			Inferential Statistics			
			Chi-square Tests			
	Observed Participa nts	Percentage %	Expecte d Frequen cy	Residua ls	Value d	Asympto f tic Sig.(p)
Individu al projects	30	30.0	33.3	-3.3	47.54 0 ^a	2
Group	63	63.0	33.3	29.7		

projects						
Other	7	7.0	33.3	-26.3		
Total	100					

When asked about their preferred mode of studying ESP, students demonstrate a clear tendency toward collaborative learning. As indicated in table 05, the Chi-square test reveal a statistically significant difference among the three response categories, $\chi^2 (2, N = 100) = 47.54, p < .001$. A substantial majority of participants (63%) prefer studying through group projects, whereas (30%) favor individual projects and only (7%) opt for other methods. These findings support the results of the previous question, which also highlights students' preference for active collaboration, interaction, and peer support, aligning with the principle of constructivist pedagogy that emphasize social learning and knowledge co-construction. The students who choose the option "other" say:

- I would like to study ESP online with professionals.
- I prefer to study ESP in real-life situations.
- I want the integration of technology in ESP courses.
- I would like to practice ESP in classroom debates and discussions for example about business.

Question Six: How far do you agree with the following statement: “I have already collaborated with my classmates on real-life projects in ESP?

Table 06 : Students’ perceptions of Collaborative real-life projects in ESP

Descriptive Statistics			Inferential Statistics				
			Chi-square Tests				
	Observed Participan ts	Percentage %	Expecte d Frequen cy	Residua ls	Value	d f	Asymptot ic Sig.(p)
Stongl y agree	8	8.0	25.0	-17.0	64.08 0 ^a	3	.000
Agree	14	14.0	25.0	-11.0			
Disagr ee	59	59.0	25.0	34.0			
Strongl y disagre e	19	19.0	25.0	-6.0			
Total	100						

As shown in table 06, students’ responses to the statement “I have already collaborated with my classmates on real-life projects in ESP” reveal significant variation across the four levels of agreement. The Chi-square

analysis indicate a statistically significant difference, $\chi^2(3, N = 100) = 64.08$, $p < .001$, demonstrating that collaboration on real-life projects is not a widespread experience among participants. A majority of students (59%) reported disagreement, while only 22% (8% strongly agree and 14% agree) acknowledge having engaged in such collaborative tasks. These findings suggest that authentic, teamwork-based ESP activities remain limited in current classroom practice, indicating a gap between constructivist principles and their actual implementation in the Algerian ESP context.

5. Discussion

5.1 Alignment of the Current ESP Course with Students' Academic and Professional Needs

The findings of this study show that students generally recognize the importance of real-life tasks, authentic materials, and the communicative approach in developing their ESP skills. A large majority agrees that such methods improve their ability to use English effectively in both academic and professional settings. When elements of authenticity and communication are integrated into the ESP classroom, students respond favorably to them and their skills improve. In this vein, it has been revealed in a previous study that ESP is a needs-driven approach in which the importance is given to contextualized instruction (Hutchinson and Waters, 1987).

Despite these positive perceptions, the present study also reveals important shortcomings in the current ESP course. Students state that tasks such as discussions are relatively common, but other tasks like role plays, projects, and presentations are less frequently used. Even more significant, the majority of students indicate that they have not yet collaborated on real-

life projects as part of their ESP instruction. This gap between what students need i.e collaborative, authentic, and task-based learning, and what is actually implemented in the classroom proves that the existing program meets their academic and professional needs to a limited extent.

Another significant result of the study is the students' preferences for group projects and other methods which indicate that they are eager for more dynamic and real-life learning experiences. Their additional comments, such as wanting technology integration, online interaction with professionals, and debates on real-world issues, reinforce the idea that the current ESP course should evolve to incorporate more authentic, technology-supported, and collaborative practices. A possible conclusion of these findings is that although the course includes some interesting elements, it does not yet provide the depth, variety, and real-world orientation that students consider essential for their academic and future careers.

5.2 Application of Constructivist Principles to Enhance ESP

Course Design

The second research question addresses how constructivist learning principles can be applied to improve ESP instruction. According to the findings of this study, it seems that students prefer learning through interaction, collaboration, and engagement with real-life contexts all of which are principles of constructivist pedagogy. Their preference for group projects, role plays, presentations and discussions suggests that they can learn more effectively when knowledge is co-constructed with peers and when classroom tasks reflect authentic professional situations.

However, the lack of emphasis on collaborative real-life projects in the current ESP program highlights a gap between the students' expectations

and the actual classroom practices. Constructivist strategies such as role plays, simulations, and project-based learning are not only engaging but also crucial for preparing students to use English in their future professions. The fact that most students have not used these methods in their ESP classes indicates that the course does not fully include constructivist principles.

In addition, the students' interest for the integration of technology and interaction with professionals further demonstrates the importance of Vygotsky's (1978) emphasis on social learning and scaffolding. Interaction with experts and the usage of authentic digital tools can offer learners opportunities to develop their knowledge through practices that reflect real-life situations. This aligns with recent research in ESP conducted by Darginaviciene (2018) in which she has found out that students prefer using technology for learning ESP, and that they rely heavily on digital resources, such as online reading materials, dictionaries, and multimedia content, to acquire new vocabulary and improve their skills.

A possible conclusion of this study is that the results suggest that integrating constructivist principles into the ESP course in the department of English at MMUTO would better meet the students' needs and would transform the classroom into a more authentic, collaborative, and motivating environment. In this respect, the existing gap between students' needs and their actual learning experiences would be filled. An implication of this finding is that more tasks should be incorporated into ESP instruction to make it more effective in preparing students for academic and professional challenges.

6. Conclusion

The present study has focused on the effectiveness of ESP course delivered to third-year students in the department of English at MMUTO

and has explored ways of including constructivist learning principles in order to better teach ESP. Findings reveal that although the current ESP course includes some elements relevant to students' academic and professional needs, significant limitations remain. In fact, students highly value authentic materials, real-life tasks, and the communicative approach, yet classroom practices largely focus on discussions with limited use of role-plays, presentations, projects, and collaborative tasks. Moreover, students' preferences for interactive and collaborative learning correlate with the constructivist learning principles. Thus, integrating group projects, discussions, presentations and role plays into the ESP course design is necessary to make ESP instruction more relevant, effective, and motivating. To conclude, in the hope that the current study inspires further research, we suggest a research that explores teachers' perceptions on integrating constructivism in ESP. Another study can be carried out to investigate the role of technology in constructivist ESP classrooms.

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