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Teaching English for Specific Purposes in a Digital Environment

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ABSTRACT

In the current globalized world, English for Specific Purposes (ESP) has been highly required to ensure effective communication between colleagues in different academic fields of study and professions. Just like other disciplines, ESP teaching has been affected by the immense ongoing technological progress. It has shifted to adopt online and technology-based educational modalities especially since Covid 19 Pandemic spread. The present paper questioned whether innovative modern digital-based approaches and materials are well incorporated in ESP classes in Algeria. It also attempted to evaluate the extent to which teaching ESP fulfilled its target objectives in the Algerian universities. To attain that end, an online questionnaire was conducted with a random sample of EFL teachers from two universities: Mostafa Ben Boulaid Batna-2 and Kasdi Merbah who were contacted via emails, WhatsApp or Facebook Messenger. It was made up of a blend of qualitative and quantitative questions. It was designed and analyzed using Google Forms. The findings revealed a lack of training in teaching and designing ESP courses. Moreover, the integration of digital tools and resources in the Algerian ESP classes was so modest and did not reflect their anticipated benefits of supporting teachers, engaging students and promoting ESP pedagogy and content. Some tips and recommendations were set by experienced ESP teachers to guide the steps of their coming generation colleagues.

Keywords: English For Specific Purposes (ESP), Digital tools and resources, online teaching modalities, blended learning, teacher training.

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1. Introduction

Teaching English for Specific Purposes (ESP) is tightly related to the surrounding circumstances. It has emerged as crucially vital medium for promoting the academic and professional endeavors of the current information-age generation of students. In parallel, the digital era has created new opportunities for ESP practitioners and learners to use the English language with the aim of boosting a nation's competitiveness, productivity and innovation in academia and marketplace.

ESP teachers need to reconsider their practices to equip their learners with the essential knowledge and skills conforming to the current digital age. They are required to customise their teaching approaches, assessing methods, types of activities and tasks, as well as their role in the course to take the fullest advantage from the wide array of virtual and tech-based materials.

The present article shed the light on ESP practice in the digital age within the Algerian higher education context. It investigated the ways digital instruments and resources are incorporated in the Algerian ESP classes. And, it attempted to evaluate their effectiveness in realizing the learning objectives of the 21st Century ESP courses. To that end, we depart from a description of the ESP teaching, digital-based materials incorporation in ESP classes, and attitudes towards their adoption, depicting any of its pedagogic enhancements and hindering challenges in the Algerian universities, to end up with the experienced teachers' recommendations for the newly hired or future ESP teachers concerning digitizing their classes.

2. Literature Review

2.1. Background on ESP teaching

English for Specific Purposes (ESP) has been a response to the international demand for English education. In the view of Hutchinson and Waters (1987), "ESP is not a particular kind of language or methodology, nor does it consist of a particular type of teaching material. Understood properly, it is an approach to language learning, which is based on learner need" (p. 19). To put it differently, ESP is a personalized approach to teaching a language as its components are tailored to suit the specific needs and goals of each individual learner. In the words of Basturkmen (2022), "ESP is the field of second or foreign English language teaching that seeks to prepare learners to use English in a particular domain, such as a workplace or profession, or in study or academic settings" (p. 512). ESP learners seek effective communication in a variety of contexts

being them academic or professional. In the light of its value, Assassi (2021) states that

> Nowadays, professionals and academics from all over the globe "need" to master the English language, as the lingua franca does not only support sharing ideas with a larger audience, but also helps in the development of the science itself, allowing scientists from different linguistic backgrounds to put their creativity and contribution into the international display. (p. 439)

Viewing the issue of ESP historically, Waters and Hutchinson (1987) date its emergence back to two main events. First, English language has become a tool for global connectivity and knowledge exchange to be fitting for the revolutionary and massive growth of business, science and technology in the aftermath of the Second World War. Second, they mention the 1970s Oil Crisis as which has affected the development of ESP. At that time, western knowledge moved into the oil producing nations where English was the only communication option. Thus, the focus has shifted from studying mere linguistic items of English to the use of language in communicative situations.

Conventially, ESP teaching occurs "in traditional ESL [English as Second Language] type classroom settings or in a range of alternative settings, such as on-site workplace support, academic writing support centers, and through the provision of self-study resources, team teaching by ESL teacher and subject specialist pairs" (Basturkmen, 2022, p. 518). With the advent of the modern revolutionary technology, this traditional situation becomes just one of a variety of options such as online and blended teaching modalities. Basturkmen describes teachers' roles in ESP as a "language teacher expert with a background in TESFL [Teaching English as a Second or Foreign Language]/ TESL [Teaching English as a Second Language]" or who needs a support from "a subject specialist" (p. 518).

ESP can be defined by two key features. First, needs analysis (NA) is seen as a core fundamental of ESP courses and curricula development. Hossain (2013) validates the claim that NA results in highly targeted courses. It collects information about learners' current level in English, reasons for studying English, and expectations from getting English courses. Due to this fact, it necessitates a comprehensive investigation of the present situation, the target situation and the context where learning takes place. Observation, interviews, questionnaires, etc are used to explore what Hutchinson and Waters (1987) call '*lacks, needs, and wants*' of the learners. Second, ESP prioritizes learner-

centeredness standing in opposition to the popular teacher-centered language teaching approaches. Alternatively, "a learner-centered approach facilitates learning through techniques involving learners" (Rao, 2014, p.1). It immerses the learners in real life situations and provides opportunities according to their objectives and needs to put grammar and vocabulary in use "with appropriateness and precision for more effective communication" (ibid.).

One of the great advantages of ESP is the cooperation between the ESP teacher and teachers of other subjects of the learners' field of study to design a course; the first provides the needed language and skills while the second affords the appropriate content supplying the learners with both linguistic and professional skills. As Coffey believes, the designing a course needs "the selection of items and features from the corpus of the language that are relevant to the designer's intention and the student's needs" (1984, p. 4). On another side, Hennessy et al. assert that "the relatively recent introduction of new technology into mainstream schooling has been widely expected to penetrate and transform teaching and learning across the curriculum" (2005). As Coffey believes, the designing a course needs "the selection of items and features from the corpus of the language that are relevant to the designer's intention and the student's needs" (1984, p. 4).

In the view of Assassi (2021), "university teachers and researchers tend to focus more on their research and pedagogical duties" and the learners aspire "for more international experience and cooperation to be opened up for new challenges and to widen their educational and professional horizons", constant search for a more effective teaching resources and tools becomes a must.

(Belcher, 2006) confirms that ESP specialists face some challenges in quest of satisfying the needs of people and prepare them to effectively engage in educational institutions, workplace, and social activities. Alvi et al. (2021) describe the process of ESP teaching as being

> To some extent a challenging task for teachers and learners as it is "language in context" that entails real life learning situations and scenarios that tend to imitate specific working or professional settings the ESP students are interested in. ESP course emphasizes the value of exercising the necessary English language skills students would primarily utilize in their future fields of activity, rather than concentrating on grammar, vocabulary, and language structures. (pp. 337-338)

In other words, designing ESP curricula and courses is seen a bit demanding as it goes beyond lexis and language forms to focus on the set of skills specific to a particular field of specialization. Conversely, English for General Purposes (EGP) classes teach English as "a subject separated from the students' real world/ wishes" (Far, 2008).

On another side, the current digital age has brought new issues to the educational arena. Buabeng-Andoh asserts that "global investment in ICT [Information and Communication Technologies] to improve teaching and learning in schools have been initiated by many governments"(2012, p. 136). That is, countries and policy makers work to develop their technological infrastructures and equipments in an attempt to enhance the educational systems.

2.2. Training of ESP Teachers

Basturkmen (2017) believes that ESP teaching covers extra-tasks "such as investigating learner needs and specialist discourse, developing courses and materials in addition to classroom teaching. Therefore, teachers encounter a variety of tasks which frequently require further knowledge and skill. Consequently, teacher training has a pertinent status in ESP. It empowers ESP teachers to thoroughly design courses and syllabuses, conduct learners' needs analysis, select and sometimes create the efficient teaching materials and assess students' progress.

Constant improvement of ESP educators enables them to profoundly understand the particular language skills needed by the learners along with the best available techniques to efficiently tackle them. By doing that, it maximizes the teachers' confidence which can positively affect the class efficiency and productivity. It improves their ability to update their teaching knowledge and methods such as e-learning to keep them in touch with the innovative strategies suiting their learners' styles and objectives. This can help to invest them at enhancing learners' engagement and make courses more productive. These effects push the teacher to boost the learners' readiness for more promising job opportunities.

Taking everything into account, training programs prepare ESP teachers for practicing their profession, constantly, improve their job requirements, and provide chances for their constant growth and enhancement. Hyland and Shaw maintain that "language training is necessary for content lecturer to participate in EMI [English as a Medium of Instruction]" (2016, p. 77).

3. Digital tools and resources for ESP Teaching

3.1. Digital Tools and Resources

The current globalized world is distinguished by "the expanding use of English as a lingua franca for work and trade purposes and as an academic lingua franca for education and research purposes" (Basturkmen, 2022, p. 512). Matched to the high technological development, education has been affected. Thus, for teaching materials to be effective, they have to encourage learners' interpersonal communication skills and to equip them with the necessary English vocabulary and language forms to ensure their academic success. According to Marco and Pueyo (2006), integrating technology in ESP courses implies considering many aspects: materials authenticity and up-to-datedness; tasks types aiming at challenging, motivating and interesting to interact or communicate in real-world contexts; incorporating multiple skills such as critical thinking and collaboration; selection of activities and materials having relation with the students' learning objectives and needs. Buabeng-Andoh (2012) affirms that "the two important elements of teaching and learning which are content and pedagogy must be joined when technology is used in lesson" (p.137).

Technological progress has made available a rich variety of educational materials. Drawing on the insights of Prensky (2001) and Van Raaij and Schepers (2008), Mpungose (2021) argues that

> The rapid development in educational technology is supported by the rising use of e-learning systems (virtual-learning systems) such as learning management systems (LMS), social media sites (SMS), video communication technology (VCT), and others, which help the university curriculum to cross borders of time and space in the digital age. (p. 1)

Those resources or materials refer to electronic materials or online content that can be accessed via digital tools and means. They include: audio and video clips downloaded or streamed via online platforms and websites; photos, icons, logos, and pictures provided through e-image libraries or stocks; free and premium apps and software abundance on online app stores and software marketplaces; free and purchased educational courses and materials such as ebooks, e-publications available on online libraries, bookstores and learning websites and platforms; social media profiles, posts, shares, updates, messages, comments available on web-based social media platforms and applications. All these can be used to assist ESP teaching.

Online technology offers an extensive array of services, options and tools that can be brought into ESP classes to take the fullest of their advantage. With the availability of Internet connection, it presents students with an abundance of authentic materials to practice and interact with native speakers. Technology helps "students gain a better understanding of the teaching material" (Yakin et al., 2022).

Chapelle (2003) maintains that "thousands of web pages claim to teach ESL through explicit language instruction by providing a forum for contact among individuals who can participate in various discussion forums, chat rooms, and e-mail" (p. 35). Emails are a case in point. They can be employed as a reliable teaching tool to support their profession sent to share documents, information, ideas, provide feedback on the peers' performance and teachers' practices, and stay updated about the trendy knowledge in the field of study. The teacher can send an email with a well-set subject being-it assignment, updates, event or announcement to immediately attract the attention of the learners. They communicate well-organized informative content. They can explain lessons and clarify concepts via illustrative videos, pictures, mind maps, etc. Replies to the sent messages aim to encourage active learning. That is students on their part are motivated to ask questions, provide feedback, and so on. The social and emotional human nature of learners is ensured.

By doing so, a sense of collaboration and belongingness to a community is created via email use. Likewise, the teacher can personalize the tasks and messages to the learners' abilities and styles, and hence, endorse personalized learning. Additionally, Derakhshan and Hasanabbasi (2015) state that emails enable "language learners to communicate directly with native English speaker" (p. 1090) and consequently foster autonomous learning. They also consider this social network as a tool that maintains permanent instructor-learner interaction and feedback. To sum up, email with its services (Gmail, Outlook, Yahoo Mail, AOL Mail, etc) operates as both facebook messenger, WhatsApp, and any other messenger apps, with a bit difference in their features.

Conferencing through educational platforms and apps allow ESP learners to participate in discussing concepts and topics as well as creating and sharing content. ESP educators can schedule synchronous Zoom video sessions for the learners. Mpungose (2021) asserts that "teaching and learning through the use of Zoom … is about collaborative decision-making by both lecturers and students" (p. 4) since they are free and autonomous in selecting the appropriate content to be shared along with the methods and pace of sharing.

Through Zoom webinars, workshops and meetings, students interact with their teachers, discuss and evaluate their courses, as well as support their colleagues through peer reviewing of each others' production. Similarly, Google Classroom allows teachers to create and manage virtual classes, post assignments and quizzes, assess students' performance, provide constructive feedback, comments and suggestions for improvement. Both Zoom and Google Classroom, along with many other utilities of the same type, target ensuring and consolidating active and cooperative remote learning.

The prominent video-sharing platform YouTube stands as a valuable tool for ESP teaching. In the words of Yakin et al. (2022), "In addition to providing a wide variety of vocabulary, YouTube videos cover a wide range of subjects, ranging from entertainment to education" (p. 369). YouTube allows the learners to create accounts to get access to a vast library of educational videos in English including movies, TV shows, and tutorials. In this manner, learners immerse themselves in the target language through authentic materials reflecting real-world use of English; this would improve their comprehension and production skills. Moreover, YouTube supports self-paced learning since learners can select content matching their interests and needs any time and at any place with internet connection availability. Besides, its features of video pause, replay, and playback speed adjustment assist to develop and test their knowledge and trace their progress. Teachers as well as learners can create their own YouTube channels, generate content, and share it to support the educational process.

An abundance of language learning applications are accessible for mobile devices and computers. Duolingo is just a case in point. It affords personalized courses through a bit challenging and interactive activities and quizzes. It motivates users to practise language vocabulary and grammar rules via games, repetition, visual illustrations, and audio files. Therefore, it suggests various teaching strategies and techniques to suit different learners' styles and objectives. Overall, digital materials integration in ESP classes aims at enhancing language learning and developing its accompanying skills.

3.2. Learning theories for ESP online Education

Last century, the learner was considered as a passive recipient of a set of stimuli to fulfill a predetermined linguistic knowledge. Mihai et al. (2002) consider "how people learn is multifaceted and, it involves interdisciplinary dimensions related to psychology and education sciences, sociology, neuroscience, biology, and computer science" (p. 2). Picciano depicts a learning theory as being "meant to explain and help us understand how people

learn" (2017, p. 166). The most famous of the learning theories are behaviorism, cognitivism, and social constructivism. They set the principles and concepts related to each discipline. They have been developed according to the necessities of the surrounding context; the same is true for digital-based education.

Picciano (ibid.) has investigated the theories and models for online education. He finds that this form of teaching employs a 'multimodal model' depending on that pedagogical objective. He refers to three frameworks of online learning. First, the 'community of inquiry model', elaborated by Garrison, Anderson & Archer (2000), becomes very popular at designing e-learning and blended learning approaches on the basis of encouraging active learning through contributions of learners and teachers sharing information, viewpoints and concepts in a highly interactive setting. It emphasizes three distinctive features or as so-called in the words of the model founders' terms- 'presences': 'cognitive, social and teaching'. Web-based collaborative platforms such as discussion boards, blogs, and wikis are used by students to view, generate and contribute content.

Second, 'connectivism' is designed by George Siemens (2004). It empowers people and organizations to have access to courses of massive enrollment with the objective of generating and developing knowledge rather than mere delivering or transmitting it. The third proposed model is 'Online collaborative learning (OCL)' of Linda Harasim (2012). It is an internet-based team-oriented theory which derives its basics from social constructivism. Learners cooperate to solve problems online. The teacher acts as a facilitator and member of the learning community. Harasim recognizes the potential of moving teaching-learning to the internet and open-access digital learning environments. She sets three phases for knowledge construction: 'Idea generating', 'Idea organizing' and intellectual convergence.

3.3. Teaching models using digital tech or blended learning Modalities

Education is a social dynamic practice that is affected by its context. Orr (1999) predicts that the shift to the use of technology-based learning models implies a change in the role of ESP practitioner's role as well as teaching methods (as cited in Marco & Pueyo, 2006). Corona virus pandemic has altered the universal view towards education. Accordingly, Mihai et al. state that "as part of worldwide strategies to limit the spread of Corona virus, policy efforts have been made to resume teaching activities online or by applying hybrid models almost overnight all over the globe" (2022, p.2). The transformation of education has created new environments. The teachers of ESP have to acquire a

specific range of skills and be trained to manipulate the latest teaching-learning strategies and techniques. They depend on "the integration of pedagogy and technology in course design" (Picciano, 2017, p. 178).

The trendy online teaching models are self-paced and encourage independent learning. They also aim at keeping the learners engaged and informed. They can be totally online or a mix of online and face-to-face. Blended learning approach in teaching ESP intends to create opportunities to students' knowledge and skills through hands-on experiences or guided activities to apply that expertise in real-life situations. By definition, blended learning is a combination of online and the conventional in-person education. Cronje (2020) introduces it through two main definitions of Graham (2006) and Driscoll (2002) consecutively. The former introduces it as a learning system that blends face-to-face teaching and computer-mediated instruction. The latter presents it as a combination of modes of internet-based technology, several teaching approaches as well as bridging instructional technology with practical experience. Blended learning is an example of integrating online language activities, video tutorials, webinars, discussion, quizzes etc in conventional classes.

3.4. Advantages and disadvantages of Digitalizing ESP Teaching

According to Dudley-Evans and St John (1998), ESP has been traditionally seen as a teaching and materials-led framework. Hence, materials selection is very important in this context. A refined understanding and awareness of these elements significance assists teachers as well as institutions to determine the most suitable means for the delivery of relevant and meaningful courses and learning experiences. Previous studies in the field shed the light on the advantages as well as the drawbacks of technology-based education compared to the traditional approaches.

Departing from the benefits, Young (2003) argues that a study on incorporating ICTs in language classes revealed that they "facilitated the creation of a virtual environment that transformed learning from a traditional passive experience to one of discovery, exploration, and excitement in a less stressful setting" (p. 447). Çelik and Aytın (2014) list the following advantages of using digital resources in language classes: developing verbal communication and reading comprehension skills, promoting international competence and global awareness, put the students in the center of language education process, satisfying multiple learning styles, encouraging collaboration, maximizing engagement as well as learning through fun. These researchers find that traditional face-to-face teaching methods and materials are

still relied on. This practice is seen as preventing learners from exposure to authentic materials, digital age required skills and opportunities for communication in real world interactive settings. Learners' engagement with different real-world assignments and tasks can enhance their productivity without being stressful, and hence, makes their attitudes positive towards learning English and ensures sustainable development of the target skills. In other words, modern digital utilities modernize the traditional teaching approaches and revolutionize language learning through new tools for communication using the target language suitable for each field of study. Hennessy et al. state that the digital forms are employed to enhance the speed, reliability, comprehensiveness and interactivity of the conventional educational tasks (2005) and methods.

The emergence of online, blended or hybrid teaching modalities becomes of significant importance in enhancing learners' autonomy and independence. Ju and Mei (2018) blended learning provides an array of advantages for both educators and learners. This type of learning assists teachers to find resources and materials meeting their students' level of knowledge and interest, enhances teaching environment, affords collaboration opportunities, and maximizes time effectiveness of courses. For students, it "increases students' interest in their own learning process, enables students to learn at their own pace, and also prepares students for future" (Ju and Mei, 2018, p. 172).

In summary, modern technology incorporation into ESP courses supports a more efficient, engaging, motivating, and personalized pursuit of language mastery and its accompanying skills development. However, a wide array of challenges may confront "global policy makers, universities, members of academia, and students… from limited infrastructure to preparedness of academia, student motivation, collaboration, interaction and engagement, as well as learning effectiveness" (Mihai et al., 2022, pp. 1-2).

4. Teaching ESP in the Algerian context

4.1. Status of ESP Teaching in Algeria

Hutchinson & Waters, 1987 described ESP as non-universal phenomenon (Hutchinson & Waters, 1987). That is, each ESP context has its particularities. In Algeria, "French has been prioritised over English for many educational, professional and administrative purposes" (Assassi, 2021, p. 440). Very recently, it has shifted to the adoption of English to conform to the requirements of the globalized world. Assassi (2021) confirms that Algeria has adopted "English as a first foreign language giving the increasing demand of English language courses by Algerian students and professionals from different

fields" (p. 440). So, university students are supposed today, more than any time before, to be equipped with the necessary communication skills that fit to the increasingly connected and interdependent international sphere.

English has always been there in the Algerian higher educational system. However, problems have risen from the type and quality of courses the learners have been studying as well as its status there. Though Algerian universities have already begun to teach some specialized English courses in several disciplines, a set of problems confronting ESP teaching in Algeria are summarized by Boudersa (2018).

First, she states that English teachers, who are actually general English teachers, are assuming the task of or are charged with presenting the lectures to university students instead of faculties recruiting specialized ones in each field. It is notable to mention that "ESP courses are assigned randomly to undergraduate students of English and without any fixed syllabi" (Assassi, 2021, p. 441). The courses in this case present exercises of grammar syntax, phonology and morphology. However, effective ESP courses are based on the analysis of learners' needs obtained through conducting surveys, questionnaires, interviews, etc. Dudley-Evans and St John declare that "needs analysis is the cornerstone of ESP" and its outcome is a "focused course" (1998, p. 121).

Second, Boudersa confirms that the type of language the Algerian students learn does not train them to be competent both in their academic disciplines and future professional settings. Another problem arises from the lack of importance or given to ESP in Algerian higher education. A fact which Assassi (2021) confirms by stating that "the lowest credit and coefficient allocated to ESP courses in comparison to specialty modules, makes students from different specialties take this course for granted" (p. 441).

The researcher Boudersa highlights a challenging situation matched to the students or the institutions of their affiliation. Some students' level in general English itself is falling short of expectations, so to say nothing about having the required knowledge and adequate skills to meet the demands of an ESP course. More serious than this, she points out to a number of instances where students are not given the opportunity to tackle English in their educational program despite of being the current language of academia (reading books, writing articles, conducting researches, attending international seminars, making oral presentations, etc).

Before all else, Boudersa finds that there is no well-designed theory-based ESP course to refer to. She also criticizes the use of "ready-made and efficient textbook or course" since students have different needs and competences in English as well as the mastery of the content of their disciplines.

From her perspective, teaching English has not given the necessary importance. This is reflected in its status as a secondary subject with a low coefficient and allocated time of one hour and a half or two hours maximum reflects the insignificance offered to English by both the Algerian universities and students. Furthermore, she notices resorting to code switching into Arabic or French to explain and make the information clearer rather than challenging the learners to develop their communicative proficiency. Moreover, the teaching approach is language-based or rather a grammar-based which is used at the expense of communication and other socio-cultural and cognitive skills (cooperation, critical thinking, problem solving) on one hand and it is in the majority of cases a teacher-centered approach.

4.2. Digitalizing ESP Teaching in the Algerian Context

Covid-19 has caused a situation of chaos and instability all over the world. It has forced educational institutions to close up their doors and suspend attendance. Countries worked to find the best measures to ensure the continuation of studies safely. In order to achieve that, transition to remote or distance education has been the only available measure.

In Algeria, the generated state of emergency has required an urgent re-organization of the educational system and has established an opportunity to seriously consider the trendy online teaching models. Although Algeria has had no experience with e-learning as an official educational practice, it has been obliged to cope with the sudden and unanticipated situation, and hence, shifted totally to online education. English classes as well as other subjects have been taught online. Since then on, a huge amount of research on the necessity of adopting online and blended or hybrid models in English as a Foreign Language (EFL) and English for Specific Purposes (ESP) has been conducted.

Digitizing ESP classes may have some specificity in issues and concerns. Only very recently, Algeria has adopted English as the second foreign language. In addition, Corona Virus spread urges the need for investigating the usefulness of digital resources and utilities in the higher-education context. Therefore, there is a deficit of knowledge in this recently emerged area.

5. Objectives of the Study

This research paper aims at evaluating the extent to which ESP classes are digitized. Moreover, it delves into exploring the ways digital technology is used in the Algerian ESP sessions along with the best strategies to adjust the Algerian university to this unique digital atmosphere. It also seeks to uncover the teaching practices which are implemented to empower ESP students with the necessary skills to succeed in this digital environment. The challenges that handicapped the quality of ESP education are also highlighted.

6. Research Questions

The questions tackled in this paper address the extent to which ESP teaching in Algerian universities adheres to as well as the

1- To what extent does ESP teaching adhere to the technology-driven movement in Algerian universities?
2- What are the effective educational strategies that keep ESP teachers' role constantly dynamic and changing to meet the requirements of the 21st century on one hand and the challenges facing them on the other?
3- What are the Algerian ESP teachers' recommendations to get the fullest advantage from the trendy virtual utilities in the Algerian higher education context?

7. Methodology

7.1. Research design and approach

A mixed-methods approach was used to collect reliable data. Qualitative data were relied on to reflect the participants' own experiences, attitudes and perspectives as well as to understand the ways digital instruments and resources were used in ESP classes. Quantitative data ensure a high extent of objectivity, minimize personal interpretations and biases, and ensure of the generalizability research findings to research population. In addition, they provide precise and accurate information permitting the researchers to answer their research questions more precisely. This fact makes research replicable by other researchers and its results can be compared to other researches ones. Hence, these measures support the research validity and reliability.

A part of this mixed-methods design was the adoption of case study as a research method; it was adopted as it provided a detailed inquiry and diagnosis of the implementation of ESP by the Algerian ESP teachers. It supported the findings with an example of the ways ESP was taught in Algeria at the technology age. It was suitable to depict the Algerian context where the study was carried out in order to find out any details or factors influencing the collected data and interfere in the findings and contribute at the understanding of the topic.

7.2. Data Collection Instruments

For a deep understanding of digital tools and resources employment in ESP classes and investigating the extent of its effectiveness, and hence, answer the research questions related to such issues, an online questionnaire was conducted to gather information from the respondents about digital tools and resources in ESP classes.

The questionnaire contained a blend of qualitative (one open-ended) and quantitative (closed-ended) questions. It consists of twenty-six elements, the majority of which are Multiple Choice Questions or require ticking checkboxes; the respondents chose one option in the former and one or more in the latter. These types of questions aimed at making the participants' mission easier by just ticking the suitable options, saving their time and reducing ambiguity of the questions. Moreover, they facilitated the researchers' task of statistic analysis of responses by identifying particular groups of patterns and themes.

The options covered by the current questionnaire were set after reviewing literature in the field of ESP and technology-based teaching. The option "other" was highly focused in pursuit of profoundly reflecting the respondents' own experiences, ideas and/ or attitudes without any bias to the research topic or researchers' standpoints.

The questionnaire was designed in Google Forms. Sixty-two (61) teachers received it via emails, two (3) via WhatsApp, and two (2) via Facebook messenger. The study participants were asked to answer it as soon as possible regarding the shortage of time of submitting the journal article. .

7.3. Population

The questionnaire was sent to sixty-four (64) EFL teachers in Motafa Ben Boulaid Batna 2 University and Kasdi Merbah Ouargla University. A random sampling technique was opted for to minimize bias towards a particular group of teachers with certain views resembling those of researchers. It was also used to guarantee that the selected sample was representative of the whole population, and hence, maximizing the generalizability of the findings to all Algerian University ESP teachers. It is worth mentioning that teachers' contribution in the current research was totally voluntary and no incentives were provided.

7.4. Data Analysis:

The collected data were deliberately analyzed through Google Forms for many reasons. First, it was manageable and smooth in terms of manipulation and analysis. In addition, it automatically summarized the collected responses in a spreadsheet format. Furthermore, it showed the number of responses for each question along with the percentage of each response option. On top of that, it guaranteed presenting and visualizing data in graphs, charts, etc.

7.5. Ethical Considerations

This questionnaire ensured confidentiality and anonymity of these study respondents in its introduction section. Additionally, it guaranteed their informed consent as the selected participants were unconditionally free to respond or neglect the questionnaire.

8. Research Findings, Discussion and Recommendations

8.1. Results

The questionnaire was answered by only fourteen teachers out from sixty-four who received the questionnaire. It is worth mentioning that WhatsApp has been more effective than Facebook Messenger and email in this study. The obtained responses were presented according to the themes covered by the questionnaire. Concerning demographic information,

The majority of the participants (78.6%) showed an experience of 5 years or more in service as EFL teachers. However, their engagement as ESP practitioners was so brief experience of less than 5 years by 71.4 % and taught English for medicine, law, business, engineering, etc. An overwhelming majority of 85.7% of the respondents did not receive any training in ESP teaching. 64.3% of the study subjects did not receive any curriculum from the faculties where they taught. They designed it by themselves. In this vein, a large percentage of 83.3% were allowed to implement their own designed or modified curricula. The content of English program was depicted as having relation with students' field of study by 64.3% of the responding individuals whereas 35.7% said it was about general English. 50% of the questionnaire takers stated that they had never cooperated with other teachers of the students' discipline to design an ESP curriculum, followed by 35.7% who sometimes did that while 14.3% claimed that happened often.

Coming to the integration of technology in ESP classes, 50% of the data contributors had used modern online or hybrid teaching approaches such as flipped or blended learning while the other 50% did not. 55.6% of those opting for modern teaching modalities because it was the only available option during Covid-19 pandemic lockdown. 22.2% believed that those approaches proved

effectiveness in achieving the teaching objectives and meeting the learners' needs.

The teaching materials employed by the research participants in their classes included textbooks and handouts (84.6%), succeeded by authentic materials such as user manuals and job advertisements (69.2%), then audio and video clips with a percentage of 53.8%. games and activities for grammar and vocabulary as well as language software, apps and computer-based programs were less referred to with a proportion of 38.5% for the former and 23.1% for the latter.

As far as the types of activities are concerned, the data providers showed a preference for reading comprehension and writing tasks matched to the students' field of study, then projects involving cooperation, team work, problem solving and communication, immediately after were grammar exercises of tenses and sentence structures, below in standing were vocabulary enrichment tasks for specialized terminology, and in the last rank came role plays, oral presentations simulating real-world scenarios. When designing tasks for ESP classes, the primary goal of the questionnaire takers was the conventional four skills with a percentage of 57.1%, seconded by communication with a similar proportion of 14.3% with pronunciation, lexis and grammar rules; teaching terminology and study texts were the least prioritised with 7%.

Related to the research participants' technological skills and mastery, the majority of them appeared as good (78.6%), 14.3% described their level as excellent, and only 7.1% had poor technological literacy. The most effective digital tools, platforms, and resources in ESP teaching were ranked by the respondents as follows: first, emails to share lectures, assignments, class updates and provide feedback; second, Moodle; third, Zoom and Google Classroom; fourth, Google Meet, fifth, YouTube; sixth, social media; in the final position, none of them were incorporated at all. Those who did not use any of the mentioned materials made a reference to limited access to technology, lack of the institutions financial budgets for the provision of such equipments and internet. Others justified abandoning those tools as they are less effective than the traditional teaching materials and methods.

A set of advantages were provided to be sequenced in order of their significance, the respondents chose collaboration among students and teachers as an ultimate benefit; then, opportunities for exposure and access to authentic materials such as real models of written texts and pronunciation practice; next,

emphasizing learner-centeredness through taking their needs into account; directly below, enhancing flexible learning for students' in their own pace, at any time and place; lowest in rank was facilitating immediate and automated feedback for students to check their progress.

The data providers believed that integrating digital tools and resources presented an array of challenges and ranked them from the most to the least common as follows: limited access to digital materials and availability of internet connection; technical problems such as unstable and slow internet; waste of class time especially when technological equipments do not function well; lack of technology literacy and training; and last ranked was the high cost of digital materials and resources.

Another source of challenge came from the difficulties faced by ESP learners with English as a language itself. The questionnaire completers ordered them from the most to the least serious: little use of English in their daily lives; lack of exposure to real English speaking situations; negative psychological attitudes such as lack of self-confidence, fear of committing mistakes, stress and lack of motivation; ignoring learners' styles and, hence, their needs; traditional pedagogy of foreign languages prioritizing grammar and vocabulary over speaking practice in their previous experiences with English; almost no one found learners' receiving negative feedback from an English teacher in the past as a source for their present struggle with English language.

With regard to assessment, the majority of the questionnaire takers claimed that they used traditional written tests and exams to evaluate their ESP students' progress. Other assessment options came in this order with no apparent difference: comprehension checks, comments on oral presentations and projects achievement; providing opportunities for learners to peer review each other's works. Online feedback on learners' contribution like asking or answering questions, participating in online discussion forums; last but certainly not least immediate feedback in online sessions as well as oral or written comments on online written assignments.

Based on the insights shared by the study subjects on the best practices ensuring effective ESP teaching in the current digital age, six main themes were addressed: First, vitality, professionalism, consistency of ESP teacher's role; second, suitable materials mainly technology-based ones along with relevant learning activities; third, value of training teachers and cooperation between ESP teachers and content experts; fourth, prioritizing ESP practicality from the Algerian perspective over foreign theoretical expertise; fifth, necessity

of conducting needs analysis as a prerequisite in designing and teaching an ESP course or curriculum; sixth, creating genuine real-life opportunities for using academic discipline-specific instead of teaching language forms in isolation.

8.2. Discussion

The analysis of the collected data revealed that ESP was typically practised by EFL teachers at the universities of Kasdi Merbah and Mostafa Ben Boulaid. The majority of them had not received any training in ESP teaching, curriculum development, and content selection. The respondents declared that they did not receive any validated curriculum from the departments or faculties where they worked. They prepared it themselves though they had no experience in building ESP curricula and syllabuses.

In this vein, Woodrow confirms that "lack of training can pose problems for both the ESP practitioner and the resulting ESP course" (2018). She depicts that training can empower ESP practitioners with new ideas for introducing and explaining concepts, and hence, the need for training centers. The latter can be organized institutions or faculties which hire knowledgeable and experienced training specialists to train ESP instructors. They can offer training face-to-face or online. E-learning modalities offer a kind of constant learning and availability of such programs for students all over the country. This can be reinforced through organizing more practical seminars and workshops at regional, national and global levels.

Coming to the delivered content, cooperation of language and subject specialists is nearly absent. Unlike the findings of Boudersa (2018) where there was a major emphasis on grammar and vocabulary exercises, a slight, although insufficient, change was remarked in the types of activities; the emphasis shifted to some reading comprehension of texts in the learners' field of study, writing tasks of genre related to their professional setting together with collective projects. The conventional four skills (speaking, reading, listening, and writing) were the focus of the lessons. Nevertheless, communication is still not a primary goal for the courses. Thus, the ultimate aim from teaching English as a 21st Century core subject is far away from realization.

The globalized world implies the adoption of different digital tools and resources in teaching. It serves for the efficacy of the educational process. The study participants' experience revealed a considerable distance from valid integration of modern technology-based teaching approaches and materials in their ESP classes. The reasons for this situation are due to: inadequate standard training and serious intentions in digitizing ESP classes, a limited access to

technological devices and internet connection, insufficient universities budgets for such equipments, and the innate preference of the traditional approaches and conviction of their effectiveness. Only a few of the study subjects opt for the use of Zoom conferencing and discussion tasks. Assessment is generally provided traditionally via written tests and exams. The feedback is often given face-to-face in class.

Although the study of Boudersa (2018) was conducted before the emergence of Covid-19 and even the unimaginable unprecedented lockdown at that time as well as the obligation to adopt online modalities, there is still no real intention, initiative or will for effective change to align with the requirements of the century. Admittedly, the respondents do not deny the advantages of digital materials and e-teaching at: creating an engaging, motivating, collaborative, self-paced learning environment; developing learners' centeredness and autonomy, providing access and exposure to authentic and various materials among many other benefits. Yet, using the technology by ESP practitioners was to do what they have always done in their regular classes. Predominantly, their practices have not changed.

The responding teachers confirmed the findings of the previously reviewed study of Boudersa (2018) concerning the students' low level in general English, let alone speaking about English related to their disciplines concepts, topics or vocabulary. This would lead the learners to suffer a lack or a loss of self-confidence, low level of fluency, and hence, less class engagement and communication in the target language.

9. CONCLUSION

The current study was conducted on a small sample of Algerian EFL teachers and limited to only two universities. Accordingly, it was supported by literature related to the topic of ESP practice in Algeria to have a clearer and more detailed scope of the adoption of the latest digital-based teaching approaches and materials. It examined how ESP is taught in the Algerian context in the age of digital abundance along with the challenges hindering their incorporation.

To put it all together, the study shows that ESP practice is still relatively ignored in the Algerian universities. Responsibility towards the current situation does not fall on a single part. It is shared by ESP practitioners, educational policy makers and students. Ministry of higher education along with universities' scientific advisory boards needs to acknowledge and prioritize ESP development in advancing science and education in the Algerian

context. A special and urgent attention should be offered to this field. This would help at enhancement of the local Algerian awareness of international scientific contributions and consolidates its presence there.

Moreover, collaboration between ESP practitioners and experts in the subject areas related to a specific field of study ensures: customized courses meeting the needs of learners, aligning with the specific language communication requirements, providing relevant and up-to-date teaching materials (journals, books, websites, etc). In addition, ESP teachers' personal efforts and contributions are valuable in promoting efficient teaching practices, improving learners' knowledge, skills and competencies and matching them with the most recent trends in the learners' academic professional fields (tools, concepts, theories, etc). They can develop and take advantage of the innovative teaching methods and techniques to create a more engaging and motivating learning space, being it online, hybrid or in-person. By doing so, they can enhance their learners' awareness and attitudes towards their studies in general and learning English in particular.

In terms of students' responsibility towards their studies as adult learners, they have to be aware of and work to develop the fundamental skills they need to ensure success in this rapidly-changing world notably self-learning, critical-thinking, problem solving, intercultural competency and communication, cooperation, and technology literacy along with many other 21st Century requirements and qualifications.

It seems concluding that awareness of the importance of ESP as a university discipline and the integration of technology and digital devices, apps and resources are an impetus and stimulus for the advancement of the Algerian higher education with a particular focus on ESP classes. ESP learners will be presented with more chances for growth and development via self-directed learning, cooperation and interaction in communicative situations using English. Algeria will meet the demands of the modern workforce and compete in the international sphere through training proficient and skillful workers and leaders.

It is worth mentioning that finding respondents who show real will to participate in research is a constant crucial issue that needs to be addressed in the Algerian research context. Urgent solutions need to be discussed and implemented for an effective participation, valid findings and a better contribution for research and development.

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