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The Role of Scientific English Writing Proficiency in Facilitating Scientific Publishing: The Case of Phd Researchers from Scientific Streams

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Dedications

I dedicate this work to:

My dear Family,

My beloved Mother Moufida BOUROUIS,

My beloved Father Saleh

My sisters Tahani, Farah and Sarah,

My brothers Ayman and Fadi,

My grandparents Maamar and Massouda

Thank you All

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Abstract

Many researchers whose second language is English face obstacles when conducting a research mainly writing a scientific paper. Scientific journals demand hard requirements as high level of language proficiency in which it seems hard to achieve for them. The present study examines the attitudes of Algerian researchers at Mohamed Khider University (MKU) of Biskra towards English as an international language of scientific communication. They need to get their works published in English for many reasons such as for promotion, to be cited or for graduation while scientific journals demand hard requirements as high level of language proficiency seems hard to achieve for them. In this regard, this survey aimed to investigate researcher's main challenges experienced by these researchers for writing international publications in English in the target scientific journals and challenges into writing in English for Research Publication Purposes (ERPP). To answer the preceding questions semi-structured questionnaire is adopted through which data about PhD researchers is collected administered to a purposive sample of (N= 17)from different scientific disciplines associated at MKU. The results revealed are an indication on the fact that scholars, who want to publish their outcomes in scientific journals, have to have high level in language proficiency and to follow strict standards that fit the target audience which seem to be hard to obtain due to their progress with the French language and the absence of specialized English.

List of Acronyms and Abbreviations

AWC: Academic Writing Courses

CARS: Create a Research Space

DC: Discourse Community

EAL: English as an Additional Language

EAP: English Academic Purposes

EBP: English for Business Purposes

EFL: Englishas Foreign Language

EFL: English as a Foreign Language

EILS: English as an International Language of Science

ELP: English for Legal Purposes

ELT: English Language Teaching

EMP: English for Medical Purposes

EOP: English for Occupational Purposes

ERPP: English for Research Publication Purposes

ESCP: English for Socio-Cultural Purposes

ESP: English for Specific Purposes

EVP: English for Vocational Purposes

HE: Higher Education

NNES: Non-Native English Speaker/Speaking

RA: Research Articles

RAs: Research Articles

SCI: Science Citation Index

UNESCO: United Nations Educational, Scientific, and Cultural Organization

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General Introduction

Introduction

English becomes a lingua franca because it is the language of: global commerce, international diplomacy, of air traffic control, the majority of academic journals, and of the most common language on internet what makes professionals in the field used to publish their books, articles, and dissertations in English to facilitate tasks for researchers. Nevertheless, the issue with the Algerian researchers is not the case because they have progressed in French more than English has. For that, we find many publications were produced a hybrid languages and many researchers invent different ways of using English. This paper is more concerned with researchers' level in English proficiency. Additionally, scientific journals obtain hard requirements in order to publish researchers' findings to their target audience.

1. Problem Statement

There are areas where many researchers find it difficult to deal with the English Language especially who are from the scientific branches. The use of language for them is necessary for promotions, job searching or writing a dissertation or even to publish such articles. They are facing obstacles because they have to master the language and at the same time being aware of the international requirements when publishing, yet these weaknesses may reduce the value of their research results.

2. Aims of the Study

The primary point of the current examination study is to explore the present status of worldwide distribution in Algeria. To comprehend the part of English in scientists' local area life just as the connection between the language variable and getting distributed in global refereed diaries to measure scientists' mentalities towards English as an International Language of science (EILS). The current investigation explicitly targets discovering how language goes about as a boundary in logical correspondence, and how analysts figure out how to adapt to applicable difficulties so as to all the more likely distinguish the Algerian PhD understudies and scientists' necessities in ERPP.

3. Research Sub Questions

This study is based on the following research questions:

- What are the main challenges facing researchers in publication process?
- What are the international requirements in publication?
- What are the attitudes of Algerian researchers towards English as an international language of science and publication?

4. Hypotheses

As an attempt to answer the research questions, we hypothesised that:

- Researchers lack the language proficiency.
- Scientific Journals demand hard requirements in order to get researchers' works published.

5. Rational of the Study

The reasoning for this investigation is showed in bringing issues to light about the Algerian requirements as far as composing and distributing RA in top notch English-medium diaries, considering their burdened status, as NNES analysts, it is critical to give them with a prompt assistance so they can defeat the 'language boundaries' which obstruct their interest in the exploration local area. Since their difficulties are not just compelled by the unknown dialect use, yet they are, likewise, worried about the overwhelming task of composing a research paper "class". It would be, subsequently, possibly accommodating to give them ERPP in their Doctoral projects in their particular fields. By this examination, we additionally should edify analysts, chiefs, instructors, schedule originators and specialists about a significant issue, yet so disregarded.

6. Methodology

Considering the nature of the present study, which is dual-focused descriptive interpretive study, which requires a detailed understanding of the researchers' experiences and challenges at MKU, as well as their needs in writing in English for international

publication, we find it necessary ,then, to opt for quantitative approach through collecting data from the respondents by using a questionnaire. As it is a small-scale project, the present study might be of interest to other universities or other scientific or research institutions. Thus, the research strategy was a case study. This involves reporting various perspectives, factors behind the situation and the relevant issues.

6.1 Data collection tools

A survey made out of open-ended and close-ended inquiries, which was managed to post-doctorate analysts and PhD understudies associated in MKU of Biskra from various orders. The point of the poll was to gather information and to reveal insight into analysts' interests for worldwide distribution to see how language troubles thwart their logical correspondence in English composition for distribution. In expansion to the poll, the analyst gathered information on three diaries, (Courrier du Savoir, Journal of Applied Engineering Science and Technology (JEAST) and LARHYSS) in request to check the scientists' distributions in neighbourhood diaries and their language of distribution at the University of Biskra.

6.2 Population and study

The examination test in the current investigation is Algerian logical specialists and PhD understudies selected at MKU of Biskra, represent considerable authority in various orders of their field of study (2020-2021). As arriving at all individuals from an optimal populace isn't attainable, (all scientists at Biskra University, CRSTRA and other examination establishments in Biskra), for it is time-consuming, just as for the exploratory idea of the current investigation, just a purposive example of 62 analysts having distributed in worldwide refereed diaries in English (basically once) was chosen to allow relevant speculations of results got from the example. The study populace was intentionally chosen as it is anything but an accessible agent of undifferentiated from research case comprising of respondents about the space being scrutinized. Notwithstanding, with a little size, alert should be applied, as the discoveries probably will not be extrapolated to all specialists. Sample:

Seventeen PhD researchers were intentionally selected from different various disciplines (Electrical & Civil Engineering, Computing Sciences)on the basis of that they have to publish in academic English.

7. Research Limitation

This investigation will be about the challenges facing researchers in publishing academically in English at Mohammed kheider in Biskra University concerning scientific streams. That they have formed in French, but they are supposed to publish in English in which they did not master the language and should to follow the international standards when publishing.

8. Structure of the Dissertation

The study is divided into two parts; theoretical and practical with two chapters, including the introduction and conclusion sections. The first two chapters are discussing the academic publications especially in Algeria. Which give a survey of writing pertinent to global logical correspondence (in periodicals/diaries/procedures), then, at that point it talks about the transcendence of EILS. It looks at the distinctive hypothetical insights towards the worldwide spread of EILS. Next, it investigates the scholarly publication in the world, gives a brief history of quality control mechanisms and English in scientific publishing and considers the challenges experienced by NNES scholars and the subsequent impacts on academic writing and publishing. Then, at that point, it investigates the territory of Algeria in the academic distribution world. Section two of this section is entitled English for Research Publication Purposes (ERPP) resolves issues identified with ERPP, thinks about its centre ideas, follows it's anything but an endeavour to comprehend its temperament, and considers its exploration techniques just as the viewpoints used to approach it.

9. Limitation of the Study

The present study aimed to investigate the role of Scientific English Writing Proficiency on facilitating Academic Publications concerning scientific streams. The findings of the survey revealed that this strategy is efficient to develop researchers' skills in order to get their publications accepted in the journals fitting their strict standards. Even though the study achieved its intended aim, it; however, represented some pedagogical issues.

The major limitation of this study was in the number of researchers because total participants are only (17) in which we opted for (30) respondents to participate in our survey. In addition, the few who have answered the questionnaire lack experience so that their feedback was not sufficient as it was expected. Yet, we could not get in touch with some researchers while many of them refuse to answer to the delivered questionnaire.

Chapter One
Academic Publications

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Introduction

Researchers from scientific streams are facing such obstacles when it comes to publish their findings in English. For this, we will discuss in this chapter Scientific English Writing in which researchers would use Special English (ESP) and (EAP) in order to write effective RAs following rewards for being a good writer as thoughts, structure, and style.

1.1 English for Academic Purposes (EAP)

There are not many definitions of EAP because it has emerged in 1980sand validly used in the last decade to be used by researchers in higher education settings. Flowerdew and Peacock (2001, p. 8) and Jordan(1997, p. 1) agreed upon the idea thatEAP is usually defined as teaching English with the aim of assisting learners' study or research in that language.

Additionally, Hyland and Shaw (2016) reports, "The term English for academic purposes (EAP) covers language research and instruction that focuses on the communicative needs and practices of individuals working in academic contexts" (p.01). They further added that EAP is more difficult to whom English is the second language because advanced communicative skills are required in advanced education settings since it includes writing critically and argumentatively (pp. 1-2). Even though EAP seems to be difficult for students and researchers, teaching EAP is designed to meet their specific needs taking into account what is related to language, the focus is on context and publication practices. For this, Ding and Bruce (2017, p.08) states:

However, where EAP is seen as an academic field of study, the practitioner's role involves developing the student's capacity to understand and use language in different contexts and, in particular, develop awareness of the discursive influences on language that arise from context. It involves developing students' ability as

discourse analysts so that they can unravel and participate in the discourses of the particular academic community that they aspire to join. Furthermore, it involves developing awareness of critical thinking as an evaluative judgment shaped by the epistemology, research methods and communicative values and genres of the particular discipline within which it occurs.

Hyland & Shaw (2016) explained that EAP is tailored to the specific needs of students and scholars, and encompasses a variety of genres, which have been classified into various sub-fields: educational, institutional and research While English as a Foreign Language (EFL) teaching offers general English instruction.

1.2 English for Specific Purposes (ESP)

English for Specific Purpose (ESP) started at early 1960s due to the enormous expansion of technology and economics in the USA, so that there was a need to be an international language and has become a lingua franca because of its current status in the academic world as an international language of business, Education and scientific research.

1.2.1 Definitions of ESP

According to Hutchinson and Waters (1987), "ESP is an approach to language teaching in which all decisions as content and method are based on the learner's reason for learning." (p. 19) they claimed that ESP must be seen an *approach* not as a *product*..It refers to the specialists in the language who are concerned with specific discourse. Coffey (1985) states that ESP is "a quick and economical use of the English language to pursue a course of academic study (EAP) or effectiveness in paid employment (EOP)" (p. 79Hewings (2002) showed that EAP, including EST (English for Science and Technology), was the most common field of research in the ESP Journal. In this regard , Meneghini and Packer (2007) point out "Any scientist must therefore master English—at

least to some extent—to obtain international recognition and to access relevant publications" (p. 113).

Both of 'the spread of English as a global language, specifically its emergence as the dominant international language of scholarly publication and, recognition of language variation, by use as well as user, as a fundamental property of language use' are the two key developments during the emergence of ESP as an influential part of English language teaching (ELT) since the sixties as indicated by Ferguson (2007). He clarified that 'Without the first there would, for reason of lack of demand, be no ESP –at least on the scale we presently witness. Without the second, ESP would lack vitality as a distinct enterprise'.

1.2.2 Characteristics of ESP

Hutchinson and Waters (1987) considered ESP as an approach; however, Stevens (1988) differentiate between absolute characteristics and variable characteristics of ESP. first, ESP courses of the absolute characteristics are:

a) designed to meet the specific needs of the learner;

b) related in content to particular disciplines or occupations;

c) centred on language specific to those disciplines or occupations;

d) In contrast to General English.

Second, ESP courses of the variable characteristics are:

a) may be restricted in the skills to be learned;

b) may not be taught according to a particular methodology.

In the same vein, Robinson (1991, p. 2) proposed two criteria to define ESP courses:

a) ESP programmes are normally goal-oriented.

b) They derive from a needs analysis.

1.2.3 Types of ESP

Through the development of ESP, it subdivided into various types; Mackay and Mountford (1978) propose three types of English learning purpose:

a) Occupational requirements,

b) Vocational training programme, and

c) Academic or professional study.

Relying on this, Munby (1978, p. 55) divides ESP into two broad areas:

a) English for Occupational Purposes (EOP) "where the participant needs English to

b) perform all or part of his occupational duties", and

c) English for educational Purposes (English for Academic Purpose or EAP) "where the participant needs English to pursue part or all of his studies"

However, three types of ESP were categorized by Carter (1983):

a) English as a Restricted Language (examples: Language used by air traffic controllers or by waiters)

b) English for Academic and Occupational Purposes (EAOP) (which is the heart of ESP), and

c) English with Specific Topics (needed in postgraduate reading studies, attending conferences or working in foreign institutions).

Hutchinson and Waters (1987) have established a "Tree of ELT" (Fig. 1.1), in which ESP is described and broken down into three branches:

a) English for Science and Technology (EST)

b) English for Business and Economics (EBE), and

c) English for Social Studies (ESS) (p. 17).

Each of these subject areas is divided into two other branches: English for Academic

Purposes (EAP) and English for Occupational Purposes (EOP).
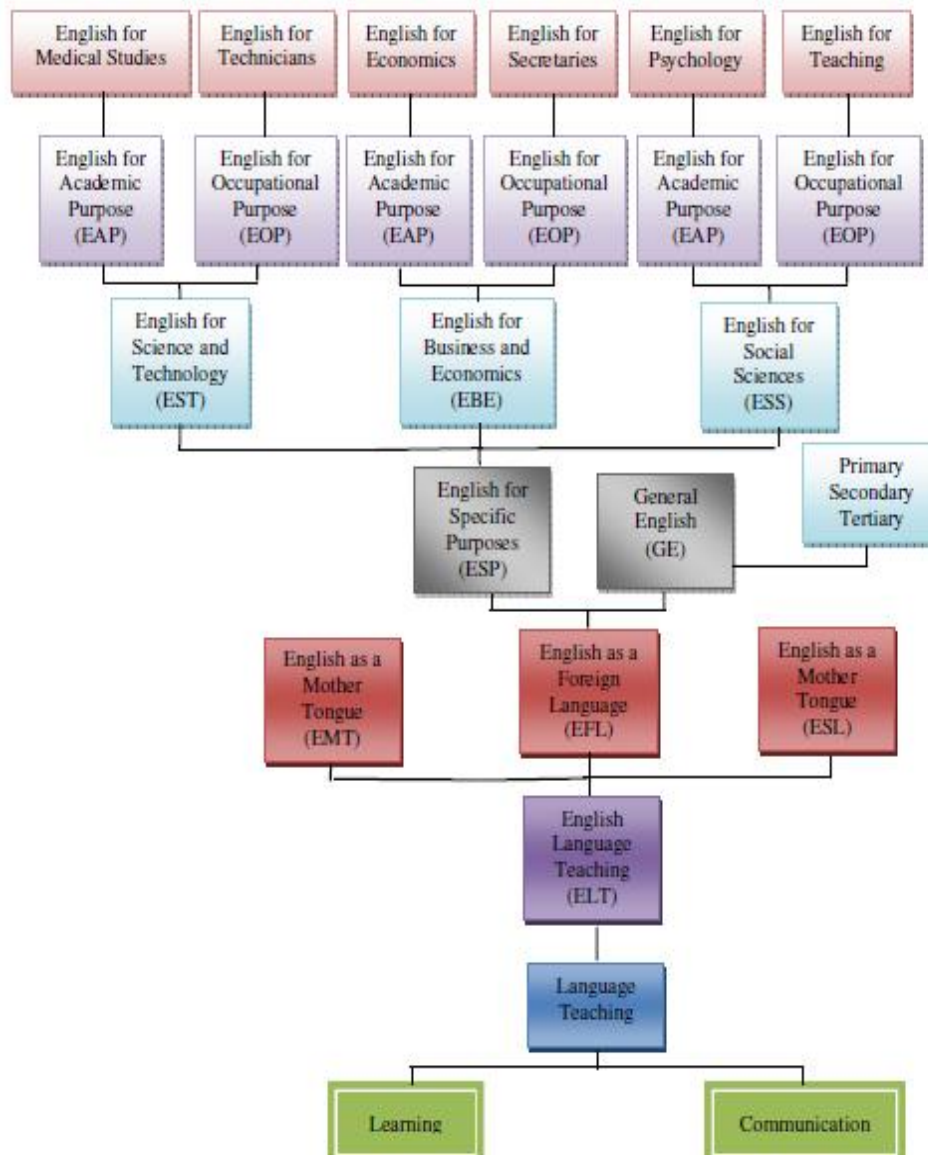
Figure 1.1 : Tree of ELT, (source: Hutchinson and Walters, 1987, p. 17)

1.2.4 Basic Concepts of ESP

Swale (1990) defined five conceptions of ESP:

1.2.4.1. Authenticity

Using authentic materials means using truthful and reliable and materials to have

the right basics confirming the information regarding to this Morrow (1980),argue that

ESP students were needed to utilize ESP materials which employee similar abilities and procedures as would be needed in the objective circumstance as cited in Debabeche (2015). According to Close (1992), Claimed that main purpose of ESP is to accomplish communicative competence and develop such skills through appropriate ESP teaching authentic materials to achieve the target situation.

1.2.4.2. Research base

Halliday, McIntosh and Stevens (1964) are the first scholars whom put a finger on ESP the principal impediment of this methodology was its origination of text as register limiting the investigation to the word and sentence levels as register was constantly characterized in these terms.

1.2.4.3. Language/text

In 1970s, there was reaction against register analysis in which there was a concentration on the communicative values of discourse rather than the lexical and grammatical properties of register. Allen and Widdowson (1974) contend that two sorts of capacity, which an English course at ESP level should target creating, ought to be distinguished: the capacity to perceive how sentences are utilized in the exhibition of demonstrations of correspondence, and the capacity to perceive and control the proper gadgets which are utilized to join sentences to make constant entries of exposition.

1.2.4.4. Learning needs

Generally, ESP is focusing on learners' needs that is established in the 1970s in which course planners came to see students' motivations as opposed to expert language as the main thrust behind ESP. Munby (1978) set up needs by examining the objective circumstance for which students were being ready. He added in (1987) through his model the place of needs as central to ESP.

1.2.4.5. Learning/methodology

Programme assessment is quite crucial concerning ESP. Evaluation is under assessment in which learners' capacities are evaluated if they would communicate effectively or not using the target language. Hutchinson and Waters (1987) refer to this approach as the learning-centred approach and pinpoint the importance of teaching/learning style in ESP materials.

1.3. Writing for Research and Publication Purposes (ERPP)

In the previous twenty years, studies tending to writing for international publication have seen an expanding concern. In the mid-nineties, pivotal investigations in this space have been conducted (Flowerdew, 1999a, 1999b).

Writing for publication has become a necessity for researchers to gain experience in the field of study, as well as to obtain a promotion; as it maybe compulsory to prove themselves and demonstrate their scientific and cultural level through years of research and work. therefore, interest in international publication has been increasingly well documented and has even resulted in the introduction of a new term in English for Academic Purposes (EAP): English for Research Publication Purposes (ERPP), leading to a special issue on ERPP in the Journal of English for Academic Purposesin 2008 (Adjadj, 2018). Cargill and Burgess (2008) have defined ERPP as follows:

English for Research Publication Purposes (ERPP) can be thought of as a branch of EAP addressing the concerns of professional researchers and postgraduate students, who need to publish in peer-reviewed international journal. While EAP programs in universities can address some of these needs in a general way, the real-life, specific issues for academics, whose L1 is not English wishing to publish in English, are often broader and more Complex (p. 75).

The issues, discussed earlier, bring about the need for positive changes and effective interventions to tackle them. Attention should be needed to the pivotal role that ESP researchers and practitioners play in this area. In this sense, Flowerdew (2013a) States:

> It is here that there is an important role for the English for specific purposes (ESP) researcher and practitioner. This can take the form of researching the specific nature of the favoured target genre of the research community, the research article (RA); in investigating the social situation in which scholarly writers find themselves; and in applying the findings of this research to pedagogic intervention (p. 306-307).

That means ,ESP has a significant role as it determined by the nature of research and this can appear as exploring the particular idea of the supported objective class of the exploration local area, RA is applied the discoveries of research to pedagogic intervention.

1.4. Approaches to Theory in ERPP

According to Flowerdew (2013a), ERPP theory and research can be classified into two categories: discourse analysis (product-oriented research), social constructivist, and situated learning theory-informed (process-oriented research). Both of which might be informative for research writers themselves. He further added that research articles (RA) genre works are essential in ESP research, especially Swales' model for RA's introductions. However, there are many research works that have been conducted on other sections of the RAs including: discussion, results and abstracts sections (Discourse Analysis).

The description of the RAs genre in rhetorical and linguistic terms is crucial in ESP research. This research has been carried out under the labels of 'genre analysis, corpus-based discourse analysis, and contrastive rhetoric'. The significance of this work to ERPP

is that, ESP professionals effectiveness in helping, not only33 EAL writers but also L1 writers in writing successfully for publication, depends greatly on sound awareness about the structure of the RAs (Flowerdew, 2013a). Following Flowerdew again, the most researched features include the schematic structure, the prototypical structural patterns that make up the genre and its parts, lexico-grammar and how the parts (moves) as well as politeness and citation conventions are realized linguistically. Other studies on the RA have also been concerned with the contrastive rhetoric paradigm Ahmad (1997).

Writers from one language background may transfer features of the RA from their L1 to their writing in English (also referred to as intercultural rhetoric). Flowerdew (1999b), as an academic papers' reviewer, outlined the most specific difficulties with academic writing among others as follows: grammar, use of citations, making reference to the published literature, structuring of argument, textual organization, relating text to audience, ways in which to make knowledge claims, ways in which to reveal or conceal the point of view of the author, use of 'hedges' to indicate caution expected by the academic community and 'interference' of different cultural views regarding the nature of academic processes.

Flowerdew (1999b, p. 127) claims that: "Although grammar was identified as one of the most features of NNES writers, its seriousness is downplayed by second-language specialists and journal editors and reviewers". This means that abstract patterns are more problematic than grammatical features 'surface errors'.

1.5. Genre Analysis Discourse Communities

Before defining genre analysis discourse, it would be better to define the term 'Genre'. For this, Swales (1990) explained genre as follows:

A genre comprises a communicative class of events, the members of which share some set of communicative purposes. These purposes are recognized by the expert members of the parent discourse communities, and thereby constitute the rationale for the genre. This rationale shapes the schematic structure of the discourse, influences, and constrains choice of content and style (p.58).

That means that the individuals from what share some arrangement of communicative purposes are from Genre informative class, experts of discourse communities perceive purposes. This reasoning shapes the schematic construction of the talk, affects, and obliges decision of substance and style.

Swales (1990) additionally asserts that genres are not texts but rather 'a class of communicative events' and texts perform genres, and with the use of genre analysis techniques, ESP students can be taught how to recognize (as readers) and mimic (as writers) the schematic structure" of texts in their selected discourse communities (as cited in Flowerdew, 2013a, p. 80). In the following section, it is useful to provide a brief outline on criteria presented by Swales to identify a discourse community.

Discourse communities (DC) are what Swales (1990) refers to as "people with shared social conventions, who link up in order to pursue objectives that are prior to those of socialization and solidarity, even if these latter should consequently occur." (p. 24).

Swales (1990) presents a set of criteria for the identification of a discourse community. According to him, a discourse community:

- Has a set of common public goals;
- Has a set of mechanisms of intercommunication among members;
- Uses participatory mechanisms to exchange information and feedback;
- Utilizes and hence possesses specific genres in the communication of its goals;

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- Uses some specific lexis (jargon); and

- Has a threshold level of members with a suitable degree of relevant content and

- discoursal expertise(p. 24).

Commenting on this, whatever occurs between individuals whom shared social conventions; DC would achieve some goals because of set of criteria concerning DC such as: having common public objectives, bunch of components of intercommunication among individuals.

1.6. Scientific Publication Trends in Algeria

Like many researchers, Algerian researcher strives to publish his RA and his findings .Statistics from DGRSDT (2017) demonstrate that Algeria's total number of scientific publications in all disciplines has been increasingly growing both at the national and international levels between the span time of 2000 and 2016 (see Figure 1.2). The production of research papers has respectively expanded from publications in 2016, representing a rise of 1125% (as cited in Adjadj, 2018).
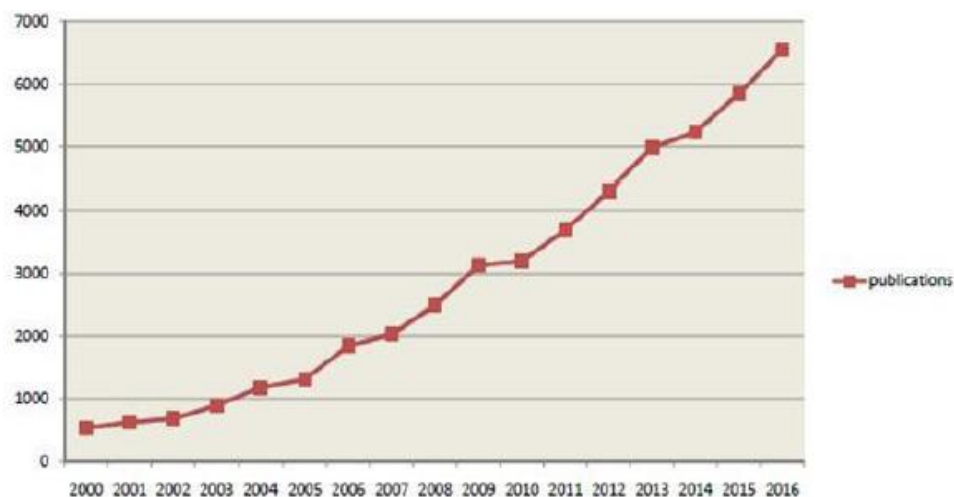
Figure 1. 2 Scientific Publications of Algeria (All disciplines), 2000-2016

1.7. The Publication for Research

Publishing has become a necessity in which the researcher shares and records his ideas, so that the other researchers can see his work and thus it becomes a reliable source preserving his rights; so researchers benefit either to take the information or to complete the findings of the researchers who have accepted. As highlighted by Barras (2002) that "to make faithful Records, of all the Works of Nature, or Art, which can come within their reach" (p. 03).

1.8. Reasons to Publish

Without research publication, so there is no importance to the researcher's years of efforts. Rothman declared,

- Scientists communicate the fruits of their labour mostly in writing, and mostly in scientific journals.

- Conferences and other forms of verbal communication. Kenneth Rothman (www1).

Jennifer Peat (2002) mainly researchers publish because:

- Of job promotion.

- The publication of researchers' scientific article in well-respected journal is considered an achievement.

- Publications are imperative for career advancement and for the economic survival of research departments.

- The number of successful publications measures research productivity.

1.9. Rewards for Being a Good Writer

According to Peat (2002), to be a good writer many things should be taken into consideration the following:

- Having good scientific writing skills brings many personal rewards

- Time is more productive and less frustrating Peers

- Experience role to review and edit the scientific writing (p. 07, 08).

The researcher should have some characteristics and skills in order to be a good writer, in addition to some guidelines of the scientific writing.

1.10. Thought, Structure, and Style

There are crucial elements of scientific research that must be provided and taken into account when writing, so that the content would be comprehensible and effective at the same time. As linked to the Peats 'definition (2002) of the scientific writing as "a well-defined technique rather than a creative art. The three basic aspects to effective scientific writing are thought, structure, and style"(p .08). He further explained:

• Thought is a matter of having some worthwhile results and ideas to publish. You need some new results to publish and you need to be able to interpret them correctly.

• Structure is simply a matter of getting the right things in the right place (p. 08)

• Style is a matter of choosing the fewest and most appropriate words and using the rules of good grammar. When you ask for feedback on the thoughts and structure of your paper, you are asking for a macro-review of the basic content.

Moreover, papers that are written in a poor style in terms of expression and grammar are unlikely to appeal to editors, reviewers, or fellow scientists, and are unlikely to be published in a good journal.

1.11. The Importance of Publishing

Researchers are in dire need of publication because of its benefits and what could publication serve to them either in the academic world or to their personal life. In addition, Researchers' target audience could be waiting for their recent findings in order to get benefits. According to Osvaldo, Oliveira, Schuster and Zucolotto (2014), through publishing in all sorts of media, researchers find themselves responsible and at the same time aiming to share their ideas and findings of research with the scientific community and with the world as well.

Conclusion

Following the technological and the economic developments in U.S.A, English language becomes a lingua franca and an international language especially for publication such a research. Then, the emergence of English for a Specific Purposes (ESP) in which the focus is on specific researchers' needs to achieve the target situation and audience. Meanwhile, ESP incorporates English for Occupational Purposes (EOP) and English for Academic Purposes (EAP). In addition, there was a need for English for Research Publication Purposes (ERPP) which containing approaches. Genre and Discourse Analysis are related to ERPP that take in consideration thoughts, structure, and style for being a good writer in order to publish a scientific paper.

Chapter Two:
Scientific Writing

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Introduction

Researchers specialize in several fields, which made writing and publishing a special concept, including scientific writing, as it has characteristics and methodologies that distinguish it from other writings. However, scholars should follow and consider many things in order to have clear, effective piece of writing that is understood by the target audience following such requirements.

2.1 English as an International Language of Science (EILS)

Due to the current position of English in many fields such as Economics, Education, Sciences…etc. It has been used as lingua franca (ELF) and as an international language of sciences (EILS). In this regard, Lillis and Curry (2010) states, : "[English is] considered by prestigious institutions to be the global language of science and by many participants in text production–scholars, reviewers, translators, scientific journal editors–as the default language of science, academic research and dissemination" (p.1). They, besides, notice thoughtfulness regarding the expanding conspicuousness of the diary article as a marker of scholarly execution, predominantly in characteristic sciences, alongside the prevalence of English in scientific communication.

Many researchers as De Swaan, 2001), have depicted as "circular process" whereby English is the mechanism of specific status in logical distribution, including for researchers to distribute in English-language diaries for worldwide acknowledgment, accordingly boosting both the distinction of diaries just as EILS.

2.2 Definition of Scientific Writing

Scientific writing is seen as specific type of writing in which it contains technical words related to the field. Gastel and Day, (2016) define scientific writing as follows:

The term scientific writing commonly denotes the reporting of original research in journals, through scientific papers in standard format. In its broader sense, scientific writing also includes communication about science through other types of journal articles, such as review papers summarizing and integrating previously published research. And in a still broader sense, it includes other types of professional communication by scientists—for example, grant proposals, oral presentations, and poster presentations. Related endeavors include writing about science for the public, sometimes called science writing (p. 03).

Moreover, either scientific writing is necessary to researchers to publish their findings in journals or in any sort of media in which it follows international requirements of writing. Peats (2002) added the scientific writing is "a well-defined technique rather than a creative art. The three basic aspects to effective scientific writing are thought, structure, and style" (p .08). Yet, the scientific writing is controlled by international standards to be read.

2.3 Characteristics of Scientific Writing

Scientists publish their findings in journals and conferences in order to share their ideas that are related to the field following a systematic structure and specific language style. According to Osvaldo, Oleveira, Schuster and Zucolotto (2014), scientific writing:

- Focuses on specific areas of research.
- Could serve as the nucleus for sharing the new findings related to the field.

- Tends to follow a systematic structure.

- Follows traditional format.

- Uses specific language styles.

- Demonstrates creativity by ideas and concepts

- Specifies what each section should contain guidelines

In short, throughout publication, researchers could distribute their gatherings to share thoughts that are identified with the field following a methodical construction and explicit language style.

2.4 The Typical Structure of a Scientific Paper

Scientific paper has specific format including several components. Referring to Osvaldo, Oliveira, and Zucolotto (2014), the format of a scientific paper usually includes:

- The title: a short sentence, which solves the problem to attract the potential readers' attention.

- The authors' names, affiliations, and their contact data.

- The abstract: short summary of the paper, it should "set the stage" by characterizing the issue the paper will examine and summing up the commitments of the paper toward taking care of that issue. It ought to likewise express some other commitments the paper professes to make to the field. The theoretical is the second, and extended, opportunity for the writer to connect with pursuers and make them need to keep perusing.

- . Introduction: it makes way for the remainder of the paper. It is more detailed description of the background and the problem.

- Methods and Materials: the authors ought to give all the necessary details to make their research reproducible, making it feasible to anybody with equivalent

foundation, readiness, and framework to repeat or to imitate the investigation or trials. This is a typical logical approach to check (or invalidate) detailed outcomes.

- Results and Discussion: Presentation of the data, interpretation, and discussion of the results.

- Conclusions: What can one conclude from the findings?

- References: Sources used during the research reported in the paper.

In summary, following the right format of the scientific paper, researchers could have a well-prepared paper in which will be published in popular journals.

2.5 Models of Scientific Writing

There are many models researchers should follow in order to get their works published such as: the Swales Model, The CARS Model (Creating A Research Space), Alouisio and Oliveira'S Model, The Weissberg and Buker Model. Nevertheless, we will highlight The CARS Model that is proposed by Swales and because his method depends on the examination of scholarly and expert writings; users of this model could prove their arguments within specific form.

Osvaldo, Oliveira, and Zucolotto (2014. P 228) claimed about the model: "It identifies typical rhetorical moves used in the introduction section of scientific papers in English. These moves can also describe the structure of a typical abstract, which itself summarizes the content (and sections) described in the Introduction". Then they have added that The CARS Model presents a logical construction with two progressive degrees of data units "moves" and "steps. "Those degrees are about the performs and coherent in both in spoken and written discourse that to justify the content.

2.6 Writing as a Part of Science

Writing and publishing has become a necessity in the academic world in which researchers facilitate the transfer information Contributed to the development of scientific research, allowing the transfer of knowledge and knowledge gains between scientists and researchers.

2.6.1. The scientific method (SM)

To undertake a scientific task, scientists should follow the scientific method (SM) in order to find a solution to the problem. According to dictionary.com (2015), SM refers to any method of research in which a problem is identified, relevant data are gathered, a hypothesis is formulated from these data, and the hypothesis is empirically tested (depending upon experience or observation alone). It is considered to be the main feature of any scientific research, and the most preferable method for many researchers because it provides a set of clear and agreed upon guidelines for gathering, evaluating, and reporting information in the context of a research study (Cozby, 1993 as cited in Marczyk, De Matteo and Festinger, 2005).For this, Barras (2002, p. 1) declares:

Scientific research begins with a problem, which may come from personal observation or from a consideration of work done by others. Problems are tackled by the method of investigation, in an attempt to obtain evidence related to a hypothesis. If the problem is stated as a question, then each hypothesis is a possible answer to the question or a possible explanation. The observations and measurements recorded during an investigation are data, and these are analysed and the results of analysis considered, and compared with results from other investigations. This leads to the bringing together of information from different

sources, to synthesis, to the recognition of order (to classification), and to the making of generalisations (stated as norms, concepts, principles, theories and laws).

So that, to begin the scientific work; the problem should be existed either from personal observation or from earlier works that have done by others. Then, hypothesis is also crucial in the scientific method because it is potential clarification. Besides, he added that results are obtained through analysis of data and of from different sources.

In short, when finding out about the means of the SM, one may find that they differ as far as number and order from discipline to another and from a source to another. As far as number, there are logical strategies with four stages, six, seven, and nine and even with fourteen stages. As far as request, it isn't important in the first place an examination question; a few SMs start with a writing survey and some others with perception, however what is settled upon is that in the logical exploration, there are six key steps which are illustrated in the following figure:
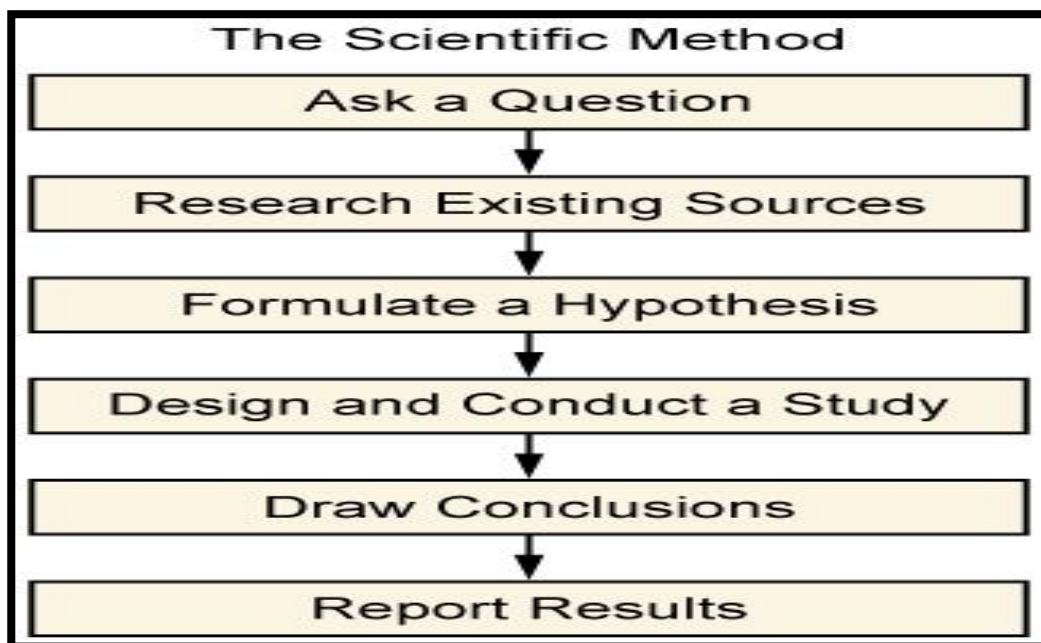
Figure.2.1. Six Step Scientific Method adopted from boundless.com (2015)

2.6.2 The popularisation of science

Recordings of scientists' findings are needed for the specialists in the field in which they tackle a problem and find solutions then. Barras (2002, p. 04)) discussed the idea of publication that:

> If we do not trouble to tell other people about science, or to discuss the impact of science on society, we should not be surprised if science and technology remain a closed book to many educated people, if the scientist is distrusted, if people do not appreciate the interdependence of pure and applied science, or if people expect too much of science. In textbooks, scientists present science not only to tomorrow's scientists, but also to those who will work and take decisions in other field.

Hereby, the author notes the need to publish in order to get benefit, whether in the scientific field or on society as a whole in all its aspects.

2.7 Developing Essential Skills

Scientists seek to develop such skills in order to be up to date to current styles of writing that suits the discussed issue. Barras (2002) argue that besides teaching science, it is need also to develop learners' skills because it would help them in both study and employment (see Table 1.1).Teaching them how to utilize techniques and instruments that they may never use in their working lives could not able them to express their thoughts clearly and simply in writing. This is something they should do each day as working researchers and specialists because writing well makes scientists being better in achieving higher grades in course work and assessments, and be more effective in their careers. The power of rightly chosen words is essential skill that should be developed to express our thoughts in writing, as clearly and simply.

The research process is to search for everything new, so scientists should develop themselves in terms of data or essential skills.

Table 1.1 Key skills needed in study and in any career as a scientist or engineer, manager or administrator *

Personal skills	Some reasons for underachievement
1 Self management	Not prioritising tasks. Not establishing and working towards achievable long-, medium- and short-term objectives. Personal problems. Problems in dealing with others
2 Money management	Budgeting problems/Worries about money Lack of financial planning
3 Time management	Poor organisation: ineffective use of time Lack of foresight
4 Summarising	Inability to get to the heart of the matter
5 Information retrieval	Not filing notes for quick and easy access Not making good use of private records, personal contacts, and other sources of information
6 Processing information	Not bringing together relevant material from different sources in personal records and communications
7 Problem solving	Not thinking through issues to a satisfactory conclusion
8 Thinking and creativity	Not thinking critically. Mindless repetition of other people's thoughts: unwillingness to consider new approaches to problems or different points of view
9 Communicating	Not expressing thoughts clearly, concisely and convincingly when speaking and when writing

2.8   The Publication of Research

Scientists record their findings through publishing for many reasons. According to Barras (2002), one reason is that, it considered, as communication between scientists is likewise the historical backdrop of science: a record of the quest for truth, of observation and opinions, of theories that have been disregarded or have been found needing or have withstood the trial of additional perception and examination. Science is a proceeding with attempt where the finish of one examination might be the beginning stage for another. Researchers should compose, subsequently, with the goal that other people might know

their disclosures. One other thing, to make loyal Records, of every one of the Works of Nature, or Art, which can draw near their scope in which others might have the option to put an imprint on the Errors, which researchers should compose.

Recording scientists' findings has become a necessity, because publication helps researchers by saving their rights concerning their ideas and results which consumed years of hard work.

2.9 Aspects to Consider When Writing a Scientific Paper

Writing a scientific paper is not an easy task because there are many things should be taken in consideration. Scientists have to be up to date concerning background information .Also, they have the responsibility to record their findings in the right way to be understood to the target audience, and they seek to write their research within specific aspects in order to make their writings effective, comprehensible and clear such as punctuation marks and spelling checks.

2.9.1 Knowing the audience

Aliotta (2018) confirmed that, scholars publish their findings on many sorts of media and journals, but deferent considerations are required depending on the type of journal. In addition, because many journals have potential readers, scientists should choose the journal that suits their target audience. Yet, the target audience are familiar with the background of the research domain especially understanding of information with a technical language.

2.9.2 Punctuation marks and spelling

Using punctuation marks is fundamental when writing a research paper because they make the ideas understood by the audience and organizes the structure of the findings

what does not fulfil the requirements of publications in journals. Aliotta (2018, p. 88) declared:

> Most common punctuation marks are easy to use: full stops indicate the end of a sentence; question marks are used to signal a question; exclamation marks to add emphasis (though this is rarely used in academic writing); capital letters for proper nouns, nationalities, languages, days of the week, months, public holidays, geographical locations and so on. Other punctuation marks, how-ever, are often used improperly, most notably the comma (,); the semicolon (;); the colon (:); the hyphen (-); and the apostrophe (').

Spelling and punctuation are two commonly shared writing difficulties among scholars. Learning to spell words correctly is expected to occur during the earliest stages during research, yet it is not always the case for spelling may become difficult in some instances. Moreover, spelling is said to be closely interrelated with reading; Frith (1980) argues, "Learning to read should imply learning to spell, and learning to spell should imply learning to read" (p. 496). However, this is not always the case, for there exist people with excellent reading abilities, but struggle when it comes to spelling words (Frith, 1980, p. 497).

Writing difficulties of relevance to spelling mainly include the misspelling of words, which are a result of the irregularities of the English spelling system (Bancha, 2013). This related to the similarities of vowels, for instance, that could be decoded in different spelling. Additionally, Bancha further explained that spelling mistakes might occur when students are less concentrated due to tiredness or carelessness about the correctness of words (p. 4). While Harmer (2001) states that "…the correspondence between the sound of a word and the way it is spelt is not always obvious" (p. 256).

Furthermore, he indicates that the reason spelling is difficult for students is "…the fact that not all varieties of English spell the same words in the same way". For instance, the way American English pronounces the word, behaviour differs from British English behaviour". In this sense, Harmer (2001) proposed extensive reading as a remedy for students to overcome spelling difficulties. On the other hand, punctuation presents an obstacle in writing.

According to Caroll & Wilson (1993), there are three problems linked to punctuation. The first is that punctuation rules are not totally exact, punctuation is complex, and it depends on one's style to determine the meaning. The way a student punctuates writing can change the meaning completely, because each punctuation mark is a distinctive way of interpreting the meaning. Therefore, students need to pay attention to the way they punctuate, which is in most cases a problem for them. Spelling and punctuation mistakes do not necessarily hinder the reader's understanding of the text but they may create a negative impression of the writer.

2.10 Academic Writing for Scholarly Publication Issues

NNES researchers are distracted when distributing their tests in order to perceive English in their field and join the global discussion in their Discourse Community (DC). (Hyland, 2015; these difficulties are largely identified as areas of concern with major digressions (language-related) and clear/non-verbal issues.

Conclusion

Scientists have to publish their works depending on the types of writing because it differs from one field to another as the scientific writing in which researchers should follow specific structure within the scientific method. In addition, scholars have to consider many things as essential skills, spelling and punctuation especially the technical terms that are related to the field in English.

Chapter Three

Fieldwork and Data Analysis

Table of Contents

Introduction

An acceptable research depends mainly on the quality of gathering data and information treatment, which the methodology reflects directly the implementation in which this chapter conveys collected information from PhD researchers from various disciplines at Mohamed Khider University (MKU) of Biskra in which semi-structured questionnaire is prepared aiming mainly to identify scholars' difficulties in the language proficiency, Second, to go in depth in their attitudes towards requirements of the scientific journals that seem to be hard to achieve for them, as well as to determine their needs in terms of training in ERPP. Ending up with the analysis and interpretation of the results yielded from the present study.

3.1. Description of the Questionnaire

The Questionnaire followed Dörnyei's (2003) ideas for moral study utilize began by hello/guidance, portraying the examination project, illustrating the point of the examination, the liable for leading the investigation, accentuating there were no right/wrong answers, mentioning fair answers, promising privacy and namelessness and saying thanks to the respondents for their time and exertion. In terms of design, the questionnaire of the present study was based on literature review principally ENEIDA project questionnaire, (Moreno et al., 2013), (Lopez-Navarro et al., 2015) as well as (Flowerdew, 1990b) and on one to one discussions we had with our departmental researchers regarding the NNES researchers and PhD students' issues relevant to writing in English for international publication in order to answer the research questions and test the formulated hypotheses.

Intended to gather information, the poll utilized in this investigation involves twenty inquiries/things enunciated through closed ended furthermore, open-finished

arrangement (just couple of inquiries are open-finished all together energize the respondents to state their viewpoints concerning the issue); the greater part of them are deliberately shut finished to work with the measurable examination measure while coding and entering the 17reaction alternatives mathematically into a PC information base. The respondents are, along these lines, given with instant answer alternatives to choose from, by ticking one of them or by placing an 'X' in the suitable box. These things don't include the respondents to unreservedly composing; all things considered, they should choose one of the other options, whether or not their liked answer is among them.(Dörnyei, 2003, p.35).

The respondents were asked to:

➢ -tick appropriate answers which best express their opinions;

➢ -rank the priorities in terms of importance;

➢ -and provide explanation and opinions when possible.

The items are grouped in four sections as indicated below:

➢ Section A: Background Information (Academic and Linguistic);

➢ Section B: Researchers' Proficiency in English Language;

➢ Section C: Researchers Difficulties in Writing and publishing scientific paper

3.2. Research Methodology

This segment addresses an endeavor to sum up the methodological lead of our examination. It tries to set out the examination approach, the exploration plan and populace and testing methods. It will likewise give a record on the utilized information assortment instrument and information examination techniques.

3.3. Research Approach

The examination embraced a subjective methodology since it was pointed toward investigating the hindrances and difficulties that specialists face when composing logical papers. The decision of subjective examination approach was because of its conformance with the idea of our investigation which requests extraordinary inclusion to foster a decent comprehension of the issue being scrutinized.

3.3.1 The sample

The study sample who took part in the present study are Algerian scientific researchersand PhD students enrolled at MKU of Biskra, specializing in different disciplines of their field of study. Due to many constraints, mainly time, as well as the exploratory nature of thepresent study, we targeted only a purposive sample of 62 researchers having published in international refereed journals in English. However, with a small size, caution needs to be applied, as the findings might specific to this case only and may not be the case to all researchers (Dörnyei, 2007).

3.4. Overview of the Study's Findings

The results of this research are presented in three main sections, each presents the data extracted from the respondents" questionnaire:

- ➢ Section A: Background Information (Academic and Linguistic);
- ➢ Section B: Researchers' Proficiency in English Language;
- ➢ Section C: Researchers Difficulties in Writing and publishing scientific paper

3.5. Analysis of PHD Researchers Questionnaire

Section A: Background Information

Would you specify:

Item 1.Your academic qualification?

Table3.1: Teachers' qualification

Gender	Respondents	Percentage
a. PhD (Doctorate)	14	82%
b. Magister	4	18%
Total	**17**	**100%**

As indicated in the table above, the majority of respondents have a Phd degree (82%) which represent fourteen participants, and the rest of them have Magister degree (18%).

Item2. The department and the faculty that you belong to:

- Civil engineering and hydraulics
- Department of Hydraulics Faculty of Technology University of Batna 2
- Civil engineering
- Computer science department
- Department of hydraulics, faculty of Sciences and technology
- Civil Engineering
- Hydraulic and Civil Engineering / science and technology
- Civil engineering and hydraulic department/ science and technology faculty
- Civil engineering
- Faculty of Exact sciences, Natural and Life sciences , Department of Computer Science
- Faculty of Exact sciences, Natural and Life sciences
- Faculty of Exact sciences, Natural and Life sciences, Department of Computer Science
- Genie civil and hydraulic

- Faculty of science and technology, departement of civil engineering and hydraulic
- Hydraulic
- Faculty of science and technology/ department of civil engineering and hydraulics
- Faculty of science and technology civil and hydraulic engineering department

Item3. Your current position/ Academic Rank:
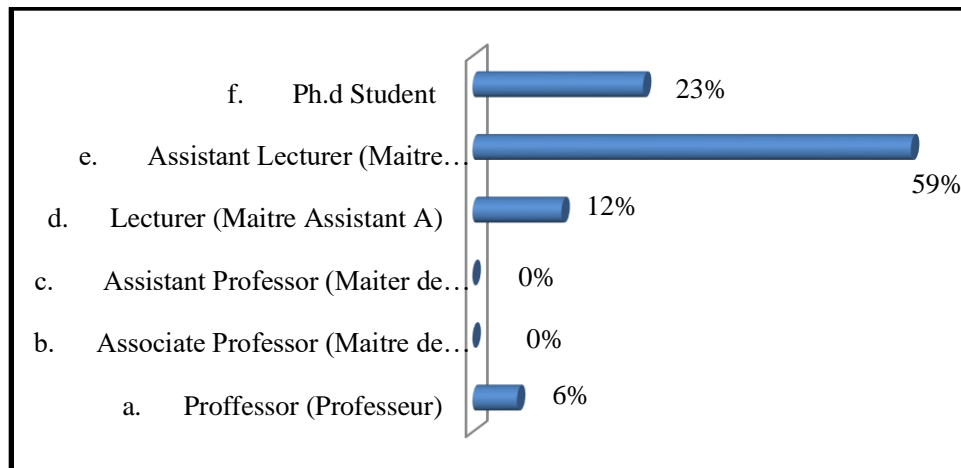
Figure 3.1: Teachers' academic rank

As the figure above illustrates, there is a percentage of (59%) of respondents who are Assistant Lecturer (Maitre Assisstant B), and (23%) are PhD students, while (12%) are Lectueres (Maitr Assisstant A), in addition, (06%) are Professors. But we have no respondents that holds Assisstant Professor (Maitre de conference B) (MCB) and Assossiate Professor (Maitre De Conférence) (MCA). So that the sample is mostly novice researchers.

Item 4. Your discipline:
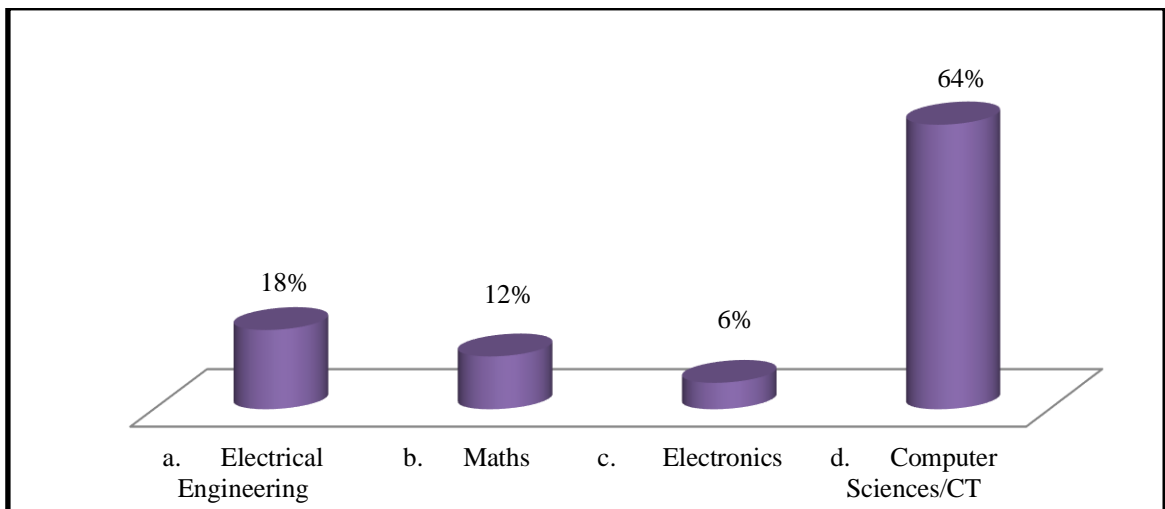
Figure 3.2: Teachers' discipline

In this question, respondents are asked to identify their discipline , the majority are from Computer Sciences/CT and (18%) are from Electrical Engineering discipline, wheras (12%) are studing Maths and the degree (06%) represents respondents that study Electrinics.

If others, please specify

- Water science
- Civil engineering
- Hydraulics
- Civil engineering
- Hydraulic engineering
- Civil engineering
- Genie civil
- Civil enegineering
- Hydraulic works and structures
- Hydraulics
- Civil engineering

Section Two: Researchers' Difficulties

Item 5. How long have you been conducting scientific research?
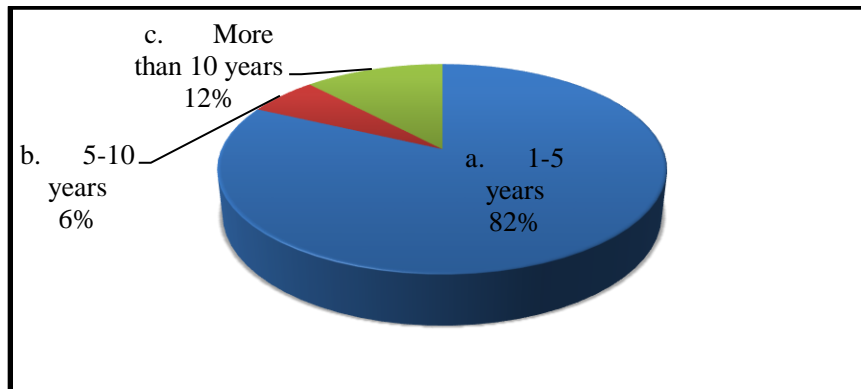
Figure 3.3: Teachers' experience in conducting scientific research

According to the results illustrated on the figure above, the majority of respondents have teaching experience of one to five years, and (12%) of them whose experience is more than 10 years, while only (06%) of them have an experience from five to ten years. This is mainly prove what has been confirmed in the item 03 that the majority of them are novice.

Item 6. According to you, conducting scientific research is:
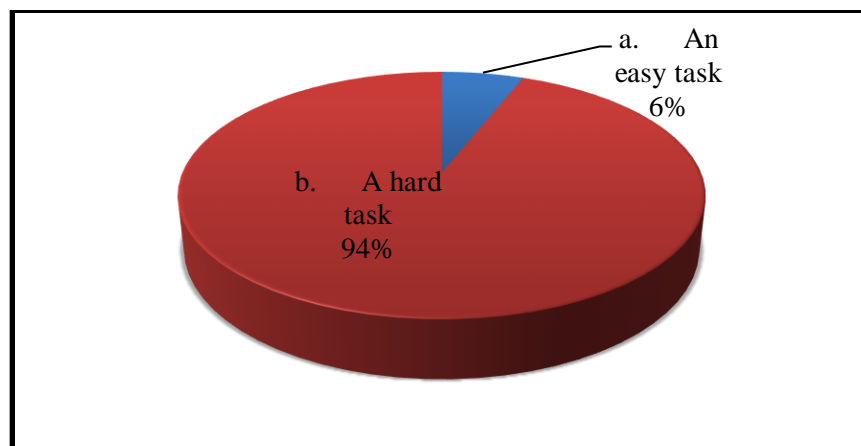
Figure 3.4 Teachers attitudes towards conducting scientific research

According to the results illustrated above, the higher rate (94%) goes to the participants who think that the scientific research is a hard task, but only few of them who think that it is an easy task .This could be due to their experience in conducting research.

Researchers' justifications

a) **For 'An easytask'**

- I like it

b) **For 'A hard task'**

- The language of publication, the quality and the responses of journal
- The absence of research laboratories in our field. Lack of material resources for the realization of our projects.
- I like it
- It needs hard and daily work and patience
- We take time to understand you real work (research)
- Absence of Funding, poor of material in lab, staying updated, change research topic to another ...
- It takes time
- The unexpected difficulties that occurs during the research, and some times the lack of some equipments
- Hard task
- Need to have background on analysis techniques
- It demands dedication and discipline. In addition, it is hard to find appropriate results as you will find yourself conducting a lot of experiments to publish a paper.
- Because you have to be always up to date with the news of your domain and you have to try find solution for the research issues.
- Lack of search capabilities
- Because you need to spend much time for the research, look for the teams around the world whose working in the same area, try to make relation with other people
- Lack of material and human resources
- Keeping up with the latest researches and trying to update the work you are doing based on the them. The other reason is finding the needed financial support for the research

- Difficulty finding information عدم توفر الالات و الوسائل لاجراء التجارب العلمية ضعف التمويل
we can't all times participate in international conference الخاص بالابحاث العلمية

Item7. What are the main difficulties that you encounter when conducting scientific research? You may choose more than one option
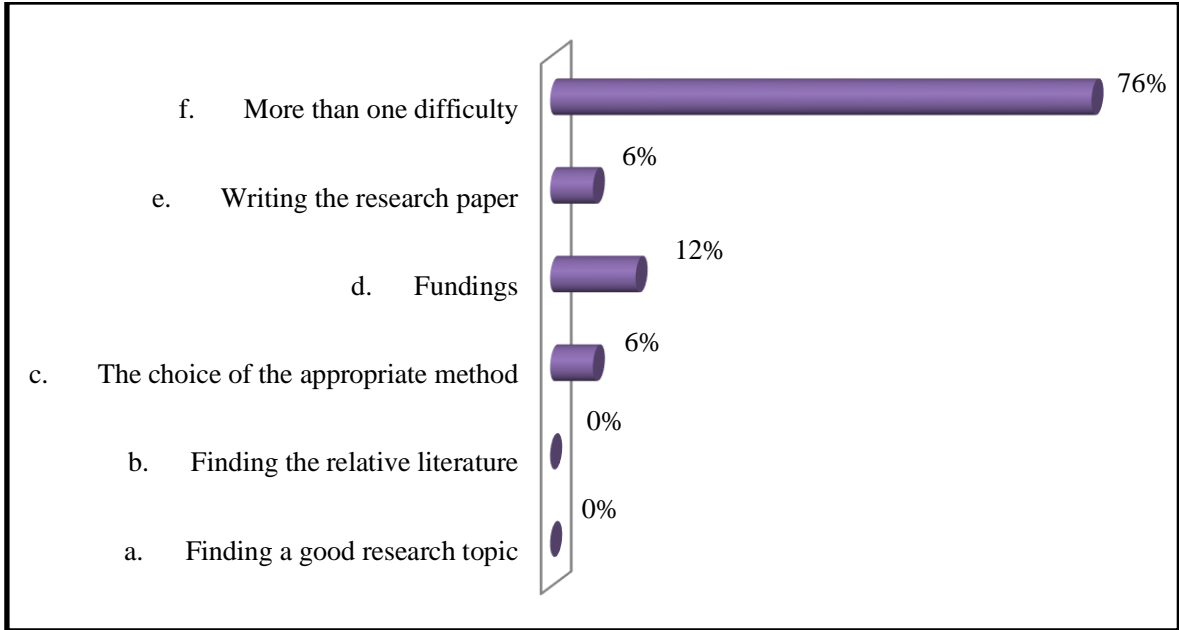
Figure 3.5: The main difficulties that the participants encounter when conducting scientific research

A percentage of (76%) of respondents face more than one difficulty and (12%) claim that their main difficulty is funding. In addition to that, (06%) refers to obstacles participants are suffer from both in writing the research paper and inchoosing the appropriate method; however, researchers have no problems in both finding the relative literature and finding a good research topic as well.

If others, please, specify

- Lack of data

Item 8.To what extent do you think that being linguistically and communicatively competent is important for conducting scientific research?
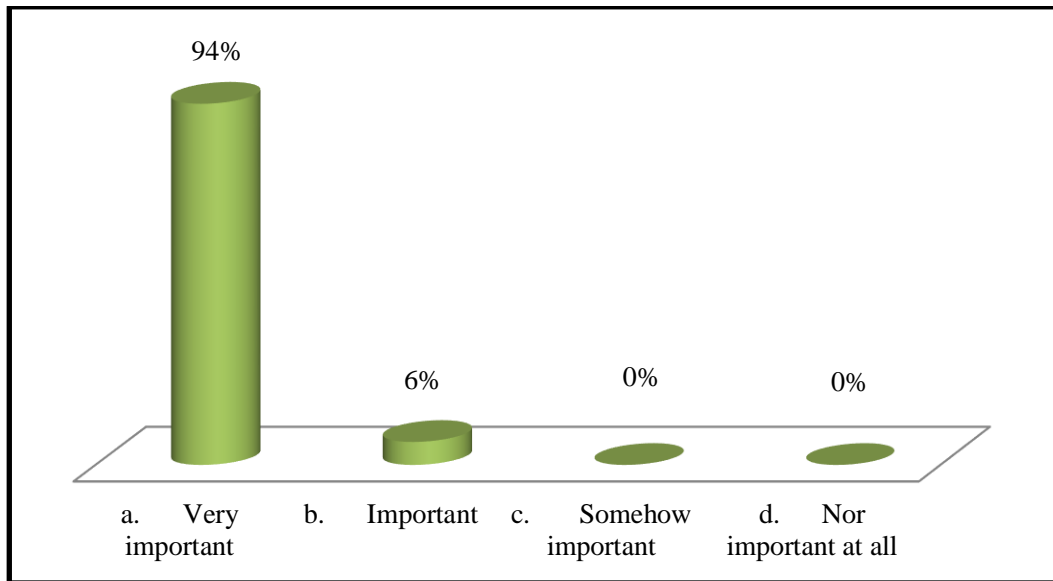
Figure 3.6: The degree of importance of being linguistically and communicatively competent when conducting scientific research

As shown on the figure, only (06%) respondents whom think English is importantbeing linguistically and communicatively competent when conducting scientific research, whereas the majority of them (94%) affirmed that it is very important.

Justify your answer, please

For 'Very important'

- Because poor quality of article language means tje paper will be rejected
- La qualité rédactionnelle, le style de rédaction et l'orthographe en plus la qualité de l'information scientifique.
- Important
- So important to read and understand previous work. In addition, to write your paper
- Because we need it in all researches
- Communication skills is very important thing
- That matters even more than the results found
- Some technical sentences could be misleading, the good skills are highly needed to extract And use the right information
- Facilitates communication and scientific writing

- Understanding the research field is half the contribution
- It is mandatory to write your papers properly and to communicate in conferences.
- Because you need it to discuss your idea and your opinion and check whether you are in the good way of your research or not.
- It is an important , because it makes it easier for us to work, understanding, and also write
- Without the two for mention, simply you can't write or explain your idea or work to the others .
- Mastering the language will help you to communicate with research teams and this communication pushes you to enrich your knowledge
- In the scientific field , especially in our domain some sentences can be hard to understand , so the slightest ignorance of all the meanings of some words could lead to severe misusing of the information
- باستعمال اللغة تستطيع ايصال افكارك و الدفاع عنها

For 'Important'

- Important

Section Three: Researchers' Proficiency in the English Language

Item9. Are you?
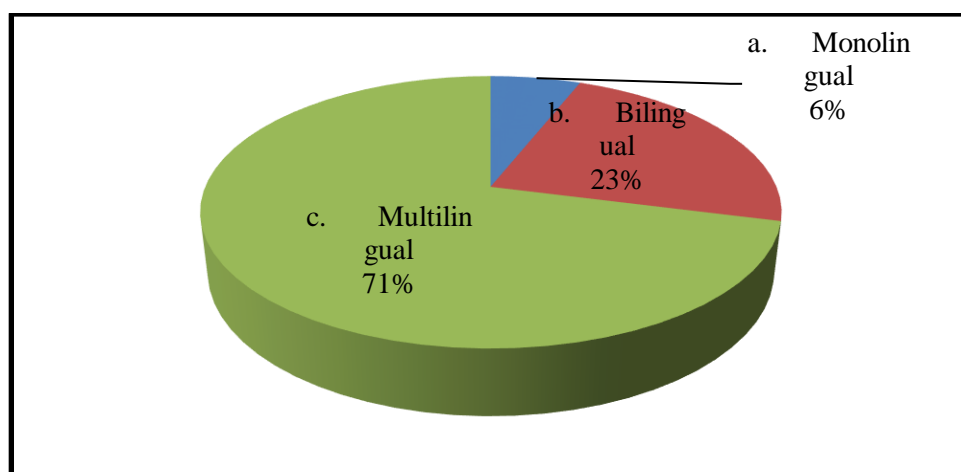
Figure 3.7: The languages that the researchers master

As clearly illustrated on the figure, (71%) is the degree which represents researchers whom master more than two languages (Multilingual). Thus, (23%) represents researchers who are Bilingual while only one researcher is Monolingual.

Item 10.If you are bilingual or multilingual, please, specify the languages, you master?

- French
- Arabic, English, French
- Arabic Language
- Arabic, English, French
- French. English and Spanish
- Arabic, English , French
- Arabic, English and French
- Arab/ French /English
- English, and slightly French
- Arabic, English and French.
- Français and Arabic
- English, French, Arabic
- Tamazight, Arabic, French, not good in English
- Arabic , English and French
- Currently I am learning in English and my level is simple

Item 11. Do you need the English language when conducting scientific research?

Table 3.2: The need for English language when conducting scientific research

Option	Respondents	Percentage
a. Yes	17	100%
b. No	0	0%
Total	**17**	**100%**

Researchers believe that they are in need to English language when conducting a scientific research.

Item 12. In which of the following stages do you need the English language the most?

Table 3.3: Stages in which researchers need the English language the most

Option	Respondents	Percentage
a. Finding a good research topic	0	0%
b. Finding the relative literature	0	0%
c. Collecting the appropriate data	0	0%
d. Writing your research paper/report	4	23%
e. Publishing your research paper/report	3	18%
f. All of them	10	59%
Total	**17**	**100%**

Most of researchers (59%) agree on many stages in which they need the English language in when conducting their research; however, a rate of (23%) of researchers whom consider writing a research paper/report as the most stage they need English in. Moreover, (18%) of them believe that publication your research/report. Yet, no one thinks that collecting the appropriate data and finding a good research topic and the relative literature is a needed stages for English.

If others, please, specify

- Internships

Item 13.Have you ever studied English at university?

Fifteen out of seventeen researchers have studied English at university, but only two of them have not.

If yes, have you studied:

c) Specialised English (the English language of your domain) — 41%
b) English for academic purposes — 6%
a) General English (GE) — 53%
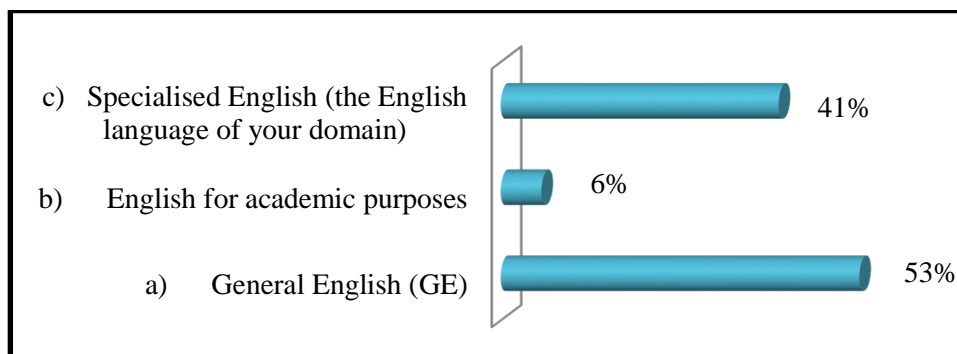
Figure 3.8 The type of English researchers studied

The figure (3.9) demonstrates the type of English that researchers studied. As it is shown,the most of them were studied General English (GE) (53%), while (41%) of them have studied Specialized English; but (06%) refers to those whom studied English for academic purposes.

Item 14. Are you satisfied with the way you have been taught English?

Table 3.4: Students' satisfaction with the way they have been taught English

Option	Percentage	Percentage
a. Yes	6	35%
b. No	11	65%
Total	**17**	**100%**

From this item, we attempted to know if researchers are satisfied with the way they have been taught English; yet the majority are not satisfied whith it in which would reflect negatively on their performance with the language and conduct a scientific research.

Justify your answer, please

a) **For 'Yes'**
- Because I had good teachers

- Yes I'm satisfied

- Because we study at the CEIL

- It is considered a scientific language

- The interest that when you always present in the class and try to talk,tell story, read from the books or whatever that's the good point and that give the courage and the trust to yourself

b) **For 'No'**
- English is a teaching module which was not fundamental like French

- I am learning free courses online

- I didn't study English

- The English courses were irrelevant to field of study

- Basic training

- We were taught basic English rather than scientific English. Both pronunciation and communication were neglected

- The English that we learn in school/university is focused on grammar and written skills while the oral is also very important especially when you find yourself presenting.

- I didn't achieve what I want.

- The problem of the methodological and pedagogical system, in addition to the lack of practice

- It was Not related to my studies

Table 3.5: The benefits of having good proficiency in the English language for researchers

Option	Respondents	Percentage
a. Writing scientific research papers	2	12%
b. Publish scientific research papers	2	12%
c. Feel connected to the international scientific research community	1	6%
d. Present your research in English at international conferences	0	0%
e. All of them	12	70%
Total	**17**	**100%**

According to the majority of researchers, many things are easy to achieve when having good proficiency in the English language for researchers such as writing and publish scientific research papers, feel connected to the international scientific research community and present their research in English at international conferences.

Section Four: Researchers' Difficulties in Writing and Publishing Scientific Papers

Item 17. In which language did you write/you are writing your dissertation?
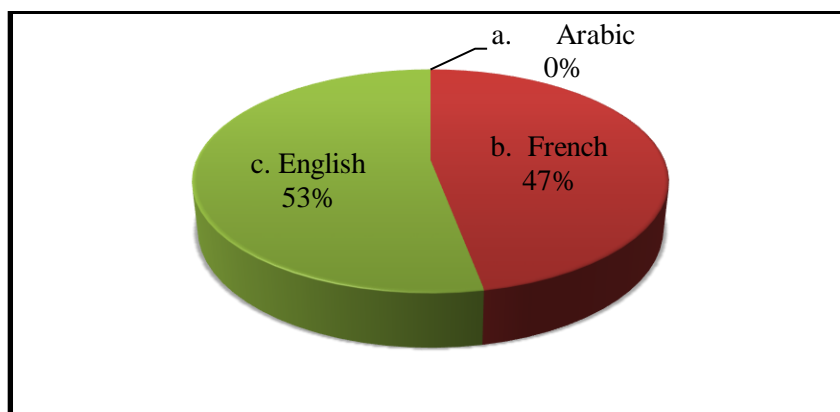
Figure 3.9: The language in which researchers are writing their dissertation

The above table revealed that we have two main participants'answers were about the language that researchers are writing their dissertation either in English orin French. But, the majority is writing in English language.

Item 18. When you read documentations, do you read:
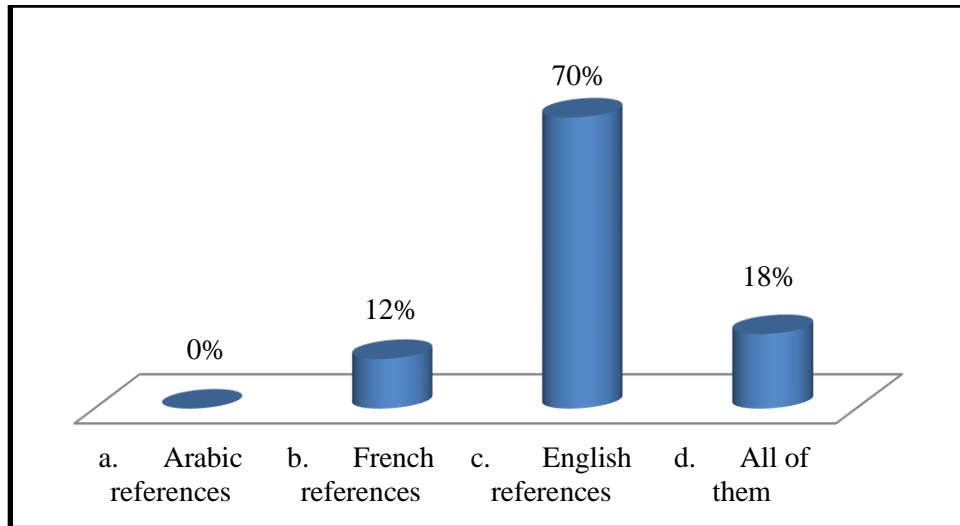
Figure 3.10. Types of references researchers read

In this question, the respondents were asked to identify types of references that researchers read. As the table indicated, the most of them are reading English references what make this language mostly important and make language exposure ; however, for the Frensh references rated only (12%).

Justify your answer, please

a) **For 'French references'**
- French and English
- All my training was in English

b) **For 'English references'**
- Because the recent references are English
- Most scientific journals are in English
- In my field only English references are useful
- English the language of research

- Most used language

- 90% of the good quality research papers are written in English.

- Most if not all of the computer science references are in English.

- In my domain the most references are in English.

- Most of the articles are in English

- Nowadays all the paper in the domain research are they in English

- Only French and English reference

- Almost all of the references are in English

c) **For 'All of them'**
- Some of the papers I used were only Written in French, that's why I had to translate them after reading them

- Some of the references that I use are written in French

Item 19. Do you find any difficulties in comprehending documents written in French and/in English?

Table 3.6: Researchers' responses about whether they find any difficultiesin comprehending documents written in French and/in English or not

Option	Percentage	Percentage
a. Yes	7	41%
b. No	10	59%
Total	**17**	**100%**

As it is shown above, the majority of respondents (59%) think that they have no difficulties in comprehending documents written in French and/in English, but acceptable percentage (41%) refers to the ones whom facing such difficulties in comprehending task.

Item 20. Would you state what kinds of difficulties you face while reading English texts?

- Some technical and general expressions
- For French no problem but for English it's difficult for me
- Grammar
- New vocabulary
- Writing is much harder than reading
- Some sentences could be misleading, or if the paper is not from my field of expertise, it may take two or three more reads to fully understand the meaning of them
- I do not understand all the scientific words
- Domain related terms
- Few words that I don't understand but you can always use a dictionary.
- Some difficult words
- Pronunciations
- Probably , for the understanding or the meaning so you need someone more experience or high level in English
- Pronunciation and understand the details
- When learning new things out of my field of expertise the technical words are what takes some time to search for them
- Scientific words some words in English

Item 21. Do you have an obligation to publish in foreign international journals?

Table 3.7: Researchers' responses about whether they have an obligation to publish in foreign/International journals or not

Option	Respondents	Percentage
a. Yes	15	88%
b. No	2	12%
Total	**17**	**100%**

As resulted in the figure above, the most of participants (88%) are obliged to publish in foreign/International journals so that publications is crusial task in researchers' academic world.

Item 22. Would you state the reasons for which you need to publish?
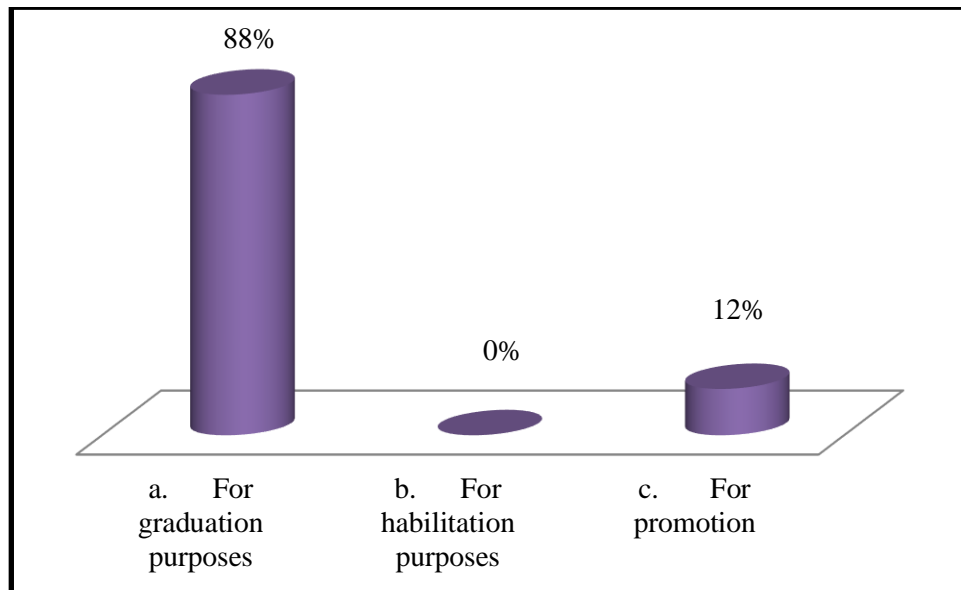
Figure 3.11: The reasons for which researchers need to publish

According to the results illustrated on the figure, the majority of researchers need to publish their findings for graduation purposes; however, the rest are in need for promotion.

If others, please specify

- In the first place it is to finish my doctoral thesis. SECOND is to enrich my knowledge and stay in touch with the evolution of research in my field

Item 23. Which of the following extrinsic factors motivate you to publish in English in scientific journals?

Table 3.8: The extrinsic factors that motivate researchers to publish in English in scientific journals

Option	Respondents	Percentage
a. For greater visibility in the international scientific literature	3	18%
b. For a professional promotion	1	6%
c. Disseminate the findings of my research to the international scientific community	0	0%
d. For the improvement of my social status and social status and social recognition	1	6%
e. Get cites in scientific journals	1	36%
f. All of them	11	64%
Total	**17**	**100%**

Many extrinsic factors motivate researchers to publish in English in scientific journals; however, (36%) of participants aimedto get cites in scientific journals. Additionaly, (18%) of them are motivated for greater visibility in the international scientific literature whereas only few (06%) are doing so for a professional promotion**.**

Item 24. What are the acceptance requirements of these journals?
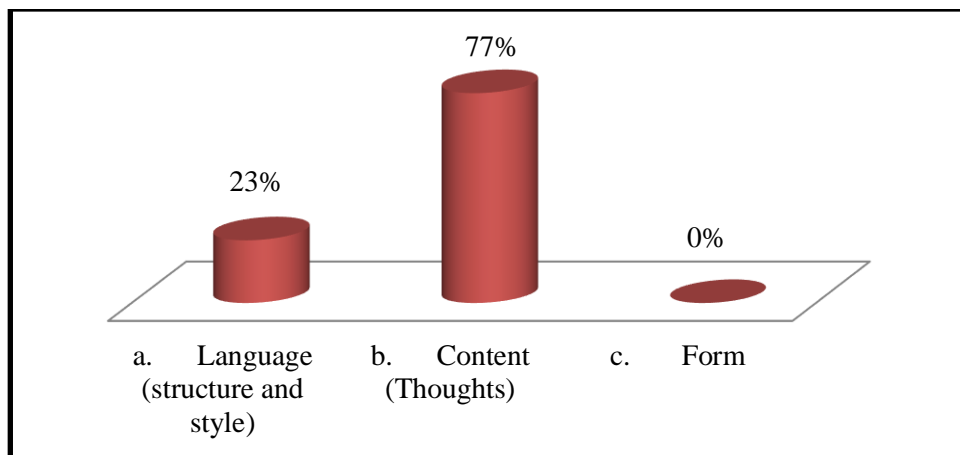
Figure 3.12: The acceptance requirements of scientific journals

From what has been mentioned above, a considerable percentage (77%) refers to content as acceptance requirement of scientific journals, while (23%) of researchers agreed on the language (structure and style) and no one think that the form as the main standard in order to get the work published in the journal.

If others, please, specify

- Also , the accuracy of the results as well as the language
- All three of them
- All of them
- The idea also it should be new and related to the interest of the journal
- Almost of newspapers require English, structure and form
- The language is also one of the requirements in these journals

Item 25. How do you find these requirements?
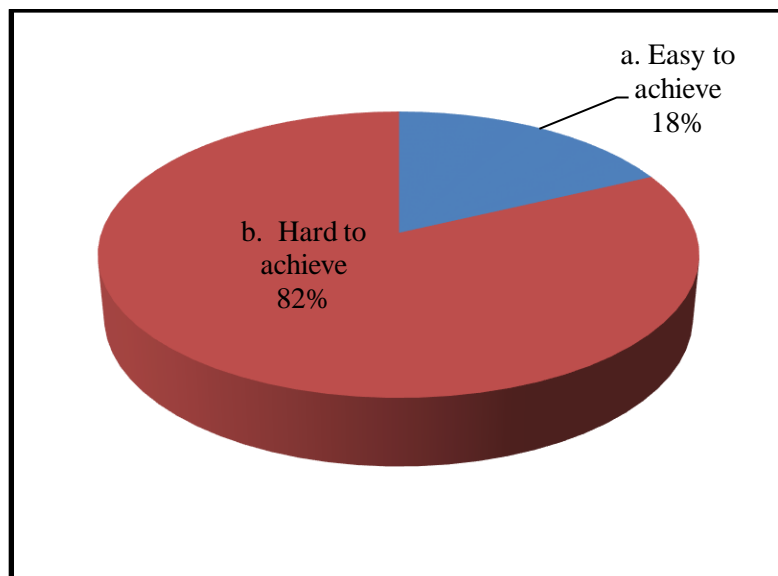
Figure 3.13: Researchers' attitudes towards these requirements

The above table revealed that we have two main teachers'answers about researchers' attitudes towards these requirements. In one hand, (82%) think that it is hard to achieve and according to their answers it is the case becauseof highstandards are

required such as language proficiency. In the other hand, we can notice that (18%) who believe that researches' requirements are easy to achieve taken into account their experience and their level in the language.

Please, say why

a) **For 'Easy to achieve'**
- Because we encourage us to work hard and make a good job with excellent result
- Be motivated to move forward

b) **For 'Hard to achieve'**
- It hard to express my ideas in foreign language
- the work with poor English can be rejected
- Some of the reviewers are very strict about the methodology and the experimental dataset , as well as the accuracy of the used references
- As a beginner, writing high quality papers is hard, but It gets easier by experience.
- It is hard to come up with new ideas and achieve acceptable results.
- I'm not native speaker and the journal require high level of writing, the content must be so modern.
- Lack of support
- mostly the publish in the top journal are hard for different reason, in such cases require hight quality of English
- low level in English
- The hard part is to be able to bring something original that meets with reviews expectations
- كما يجب التمكن في اللغة المراد النشر بها ضيق الوقت

Item 26. When writing in English for publication, do you?
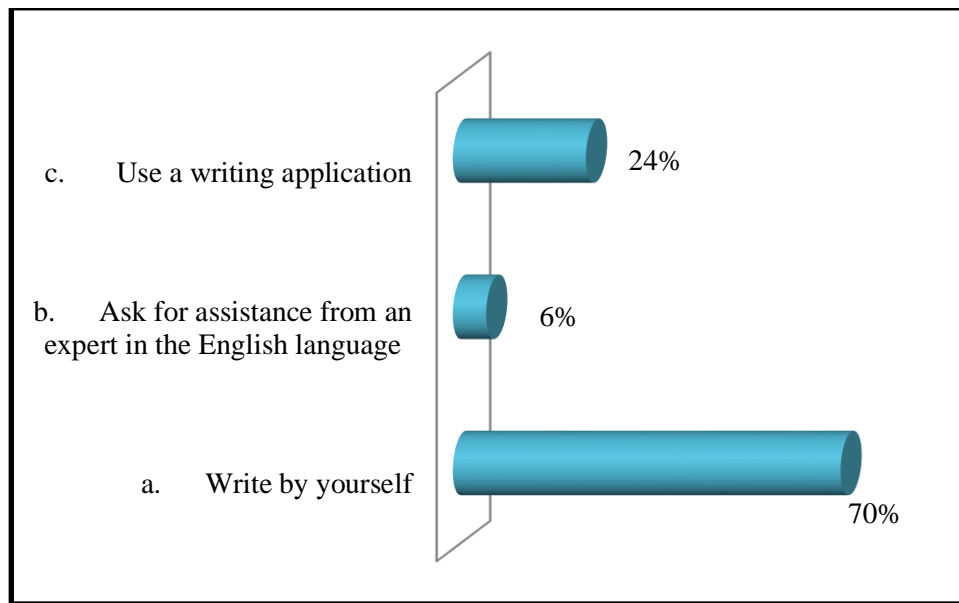
Figure 3.14: Researchers' facilities to write in English for publication purposes

This question is asked in order to know researchers' abilities in writing. The majority of participants (70%) write their publications by themselves. Additionally, (24%) rated researchers whom use a writing application; however, few of them ask for assistance from anexpert in English language. In this regard, this is either because the majority of them are novice researchers (item 03,05) so that they think writing is an easy task (language proficiency).

Item 27. Please indicate what is/are the most difficult section(s) of research articles or the documentation involved in their publication for you to write in English

Table 3.9: The most difficult section(s) of research articles or the documentation involved in their publication for researchers to write in English

Option	Respondents	Percentage
a. The abstract, the introductions and the conclusions	6	35%
b. The theoretical framework	0	0%
c. The materials and methods	0	0%
d. The analysis and the discussion of the main results	2	12%
e. The references	0	0%
f. The letter accompanying the articles when it is sent to the journal	0	0%
g. The correspondence with the editor during the evaluation process	0	0%
h. All of them	4	24%
i. More than one section	5	29%
Total	**17**	**100%**

As the above figure reveals, the majority of researchers (35%) are considered the abstract, the introduction and the conclusion as the most difficult section(s) of research articles or the documentation involved in their publication for them to write in English. Additionally, (29%) of them believe in more than one section as difficulty, while (24%) of them think of all difficulties mentioned in the figure; however, only (12%) of them consider the analysis and the discussion of the main results as the most difficult task.

If others, please specify

- The introduction is by far the most difficult section to write , it's hard to keep the balance between quoting the important information without falling in the plagiarism part

- Writing the introduction is the most difficult part, we have to be able to introduce the history and the framework without falling in the plagiarism trap

Item 28. Have you ever had any academic publications?

Table 3.10: researchers' previous works

Option	Respondents	Percentage
a. Yes	12	71%
b. No	5	29%
Total	**17**	**100%**

This item aimed to collect respondents' status in the academic world according to their academic publications, as it is illustrated above, the majority of researchers (71%) have previous works that got published.

If yes, where have you published?

Figure 3.15Types of journals in which researchers published their scientific papers

This item sought to gather respondents' types of journals in which researchers published their scientific papers. The above figure reveals that the highest percentage (50%) have published their works in international conference proceeding, while only (25%) of them are able to publish their finding in international journal what shows that they are experienced researchers with high level of proficiency in the language following strict requirements of those journals.

If you have any suggestions or comments, please feel free

- It is an interesting questionnaire that most of students and teachers need to answer good luck

3.6 Discussion of the Findings

The present study investigated the viewed challenges that Algerian Scholars in technical streams face in writing their publications in English.

The analysis of the different questions in this questionnaire provides us with valuable information that has given us the opportunity to answer some of the vital research questions that were intended to be investigated. Regarding researchers' questionnaire, it can be deduced that most of them with different ranks have learnt English in the middle and high school, but once at university received instruction in French.

Academic publications is required at the level of PhD preparation, and here, English is favored and most of the time it is an obligation. Moreover journals and reviewers require a correct Academic English with mostly of terminology in the field of interest, hence, a high level of English proficiency expected from scholars.

In this study, respondents revealed that they face many difficulties in learning English at earlier learning phases writing their research paper. And this resulted, First, the majority of our sample (59%) are Assistant Lecturer (Maitre Assisstant B) and the

percentage (82%) refers to those who have from one to five years of experience so that they are mostly novice researchersthat lack experience.

Moreover, (71%) of participants think that they are multilingual (Q9) and this is due the fact that they have learned French from primary school unlike English so that they have learnt French for 14 years compared to 07 years learning English. Researchers are supposed to write their dissertation or to publish their findings English; however, they do not feel difficulties in English when asked because they think of General use of English and because of their readings continuously during their formation, but once starting to draft a publication, they start seeing their weaknesses. This means that technical streams scholars who belong to: Computer Sciences, Electrical Engineering, Civil Engineering and Hydrolics do not conceive their real deficiency in English.

In addition, they need during their research process to translation process from French to English which entails a law level of English proficiency, and even when reading the references in English they face the problem of being unable to understand the specialized English because their instruction oblige them to write in English. For this, (94%) of researchers are convinced that English proficiency is very important. Another thing, the majority believe that writing in English is hard task because they have studied General English without satisfaction with the way they have been taught English. These results are an indication on the facts that English constitutes hard challenges for scholars in many aspects.

Conclusion

To conclude, this chapter discussed the fieldwork of the present study that aims at investigating the role of scientific English Writing Proficiency on facilitating scientific publication facing scientific streams. These results are an indication on the facts that English constitute hard challenges for scholars in many aspects. Yet, they argue that language proficiency is important in publications; nevertheless, for some journals, the academic language is more important because it is the formal form of their findings to be effective to the target audience. Likewise, they have many difficulties in reading, in translation and in drafting a high level in writing in English language. In short, researchers have a problem in meeting journals' requirements concerning language level due to the absence of specialized English at university level (French Affiliation).

General Conclusion

General Conclusion

To conclude, this study is an attempt to shed light on the role of scientific English writing proficiency on facilitating scientific academic publications. For this, the ultimate aim of the current research is to attempt to answer the research questions and to confirm the research hypothesis which states that researchers lack the language proficiency and they are unaware about the hard requirements because it is hard to achieve concerning schollars from various scientific streams in Mohamed Kheider University of Biskra (MKUB).

This study consists of three chapters; the first two chapters are devoted to the theoretical background of this study, while the last chapter represented the fieldwork. Through the first chapter, the researcher attempted to highlight the most important aspects about publications including EAP, ESP and ERPP. Initially,an over of view was provided aboutscientific publication trends in Algeria. Later in this chapter, we have claimed aspects to consider in order to be a good writer with the importance of publishing.

The second chapter dealt with the scientific writing and about English as an international language of science (EILS). Moreover, describing writing as a part of science including the scientific method following several models of scientific writing in which researchers publish their findings taking in consideration many aspects when writing a scientific paper for academic writing for scholarly publication issues.

In order to check the validity of the research hypothesis and to attain the research's aims, the researcher conducted a descriptive research for which a questionnaire was chosen as a data collection tool, namelyPHD Researchers. The former was administered to seventeen participants PhD researchers precisely those who are able to publish their

outcomes. In addition, they were chosen randomly from various branches from Mohamed Kheider University of Biskra in order to investigate their views and difficulties they are facing towards English writing proficiency and publishing scientific papers and to test the proposed hypothesis.

Through the analysis and interpretation of the data collected; as well as the thorough discussion of the findings, the research questions including the ones that inquire about the researchers' attitudes toward the role of scientific English writing proficiency on facilitating scientific academic publications were all answered.Furthermore, the collected findings confirmed the validity of this research hypothesis. The studyfindings are:

- All scholars argue that language proficiency is important in publications
- Scientific journals realize hard requirements mainly the academic language
- Researchers have many difficulties in reading, translation and in drafting a high level of language proficiency.

To conclude, the dissertation provided some recommendations for scholars to be aware about the requirements of journals and improve their level of writing in scientific English proficiency.

Implementation and Recommendation

This part includes implications revealed from this study's results of researchers' and doctoral students' practices and experiences into academic writing for international publication in Mohamed Kheider University of Biskra (2020-2012).

- Policy-makers and pedagogical planners should include ESP and EAP material developers/course designers in order to fit the needs of researchers from scientific streams

in their academic and research process. In this regard, form them in Academic writing for scholarly publication projects.

- Put more focus on EAP more than EGP in order to improve researchers' academic English abilities concerning translation and publication so that forming them to be able to publish particularly research articles.

ERPP workshops should be scheduled in which academic writing courses (AWC) is presented mainly specific genre of a research article (RA) in English.

Limitation of the study

The present study aimed to investigate the role of Scientific English Writing Proficiency on facilitating Academic Publications concerning scientific streams. The findings of the survey revealed that this strategy is efficient to develop researchers' skills in order to get their publications accepted in the journals fitting their strict standards. Even though the study achieved its intended aim, it; however, represented some pedagogical issues.

The major limitation of this study was in the number of researchers because total participants are only (17)in which we opted for (30)respondents to participate in our survey. In addition, the few who have answered the questionnaire lack experience so that their feedback was not sufficient as it was expected. Yet, we could not get in touch with some researchers while many of them refuse to answer to the delivered questionnaire.

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Appendices

Appendix 1:

Researchers' Questionnaire

Dear Doctoral Student/Researcher,

You are kindly requested to answer this questionnaire, which is intended to collect data for a Master's in Sciences of the Language. This latter is about 'The role of Scientific English Writing on facilitating Scientific Academic Publications' Your contribution will be of immense importance for the success of my study. Please tick the appropriate answer(s) and write full statement(s) whenever necessary. Be sure that your responses will be anonymous and will be used for research purposes only.

Thank you for your time, effort and collaboration.

Section A: Background Information:

Would you specify:

Q 1. Your academic qualification

☐ Ph.D. (Doctorate)

☐ Magistère

Other (Please specify)

…………………………………………………………………………………..

Q 2. The Department and the faculty that you belong to

☐ Department:…………………………………………………………………..

☐ Faculty:……………………………………………………………………….

Q3. Your Current Position/Academic Rank:

    ☐ Professor (Professeur)

    ☐ Associate Professor (Maître de Conférence A (MCA)

    ☐ Assistant Professor (Maître de Conférence B (MCB))

    ☐ Lecturer (Maître Assistant A)

    ☐ Assistant Lecturer (Maître Assistant B)

Other (Please specify)

………………………………………………………………………………………..

Q4. Discipline:

    ☐ Electrical Engineering

    ☐ Maths

    ☐ Electronics

    ☐ Computer Sciences/ICT

Other (please specify)

…………………………………………………………………………………………

Section Two: Researchers'

Q5. How long have you been conducting scientific research?

    ☐ 1-5 years

    ☐ 5-10 years

    ☐ More than 10 years

Q6. According to you, conducting a scientific research is:

☐ An easy task

☐ A hard task

Justify your answer please

…………………………………………………………………………………………………
…………………………………………………………………………………………………

Q7. What are the main difficulties that you encounter when conducting a scientific research?

☐ Finding a good research topic

☐ Finding the relative literature

☐ The choice of the appropriate method

☐ Funding

☐ Writing the research paper

Q8. To what extent do you think that being linguistically and communicatively competent is important for conducting a scientific research?

☐ Very important

☐ Important

☐ Somehow important

☐ Not important at all

Justify your answer please

…………………………………………………………………………………………………
…………………………………………………………………………………………………

Section Three: Researchers' Proficiency in English Language

Q9. Are you:

    ☐ Monolingual

    ☐ Bilingual

    ☐ Multilingual

Q10. If you are a bilingual or a multilingual, please, specify the languages you master?

………………………………………………………………………………………………

………………………………………………………………………………………………

Q11. Do you need English language when conducting a scientific research?

    ☐ Yes

    ☐ No

Q12. In which of the following stages do you need English language the most?

    ☐ Finding a good research topic
    ☐ Finding the relative literature
    ☐ Collecting the appropriate data
    ☐ Writing your research paper/report Publishing your research paper/report
    ☐ All of them

Q13. Have you ever studied English at university?

    ☐ Yes

    ☐ No

If yes, have you studied:

    ☐ General English (GE)

    ☐ English for academic purposes

    ☐ Specialised English (the English language of your domain)

Others, please, specify

……………………………………………………………………………………………

Q14. Are you satisfied with the way you have been taught English?

☐ Yes

☐ No

Justify your answer please

………………………………………………………………………………………………
………………………………………………………………………………………………

Q15. Please describe your proficiency level in English for Academic Purposes: Please put a tick

(✓) where appropriate: 1 = very low, 2 = low, 3 = acceptable, 4 = high, 5 = very high.

Skills	Aspect	1	2	3	4	5
Listening	Understanding Lectures					
Speaking	Delivering oral presentations at conferences					
Interacting	Asking and answering questions at conferences					
Reading	Articles about myresearch field					
Writing	Writing scientific articles, thesis, book chapters, translation…					

Q16. According to you, having a good proficiency in English language helps you:

  ☐ Write scientific research papers

  ☐ Publish scientific research papers

  ☐ Feel connected to the international scientific research community

  ☐ Present your research in English at international conferences

  ☐ All of them

Others, please, specify

………………………………………………………………………………………………

Section Four: Researchers' Difficulties in Writing and Publishing Scientific Papers

Q17. How do you evaluate your level in writing in English language?

  ☐ Poor - I definitely need some help

  ☐ Acceptable - but I know I could improve

  ☐ Good - I could improve with some advanced tips

  ☐ Excellent - I do not think I could improve much

Q18. In which language did you write/you are writing your dissertation?

  ☐ Arabic

  ☐ French

  ☐ English

Q19. When you read documentations, do you read:

  ☐ Arabic references

  ☐ French references

  ☐ English references

Q20. Do you find any difficulties in comprehending documents written in French and/in English?

☐ Yes

☐ No

Q21. Would you state what kinds of difficulties you face while reading English texts?

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

Q22. Do you have an obligation to publish in foreign/international journals?

☐ Yes

☐ No

Q23. Would you state the reasons for which you need to publish?

☐ For graduation purposes

☐ For habilitation purposes

☐ For promotion

Q24. Which of the following extrinsic factors motivate you to publish in English in scientific journals?

☐ For a greater visibility in international scientific literature

☐ For a professional promotion

☐ Disseminate the findings of my research to the international scientific community

☐ For the improvement of my social status and social recognition

☐ Get cited in scientific journals

Q25. What are the acceptance requirements of these journals?

☐ Language

☐ Content

☐ Form

Other (please specify)

………………………………………………………………………………………………
………………………………………………………………………………………………

Q26. Do you consider these requirements are hard to achieve?

☐ Yes

☐ No

If yes, say why

………………………………………………………………………………………………
………………………………………………………………………………………………

Q27. When writing in English for publication, do you

☐ Write by yourself

☐ Ask for assistance from an expert in the English language

☐ Use a writing application

Q28. Indicate what is/are the most difficult section(s) of research articles or the documentation involved in their publication for you to write in English.

☐ The abstract

☐ The introduction

☐ The theoretical framework

☐ The materials and methods

☐ The results

☐ The discussion

☐ The conclusions

☐ The references

☐ The letter accompanying the articles when it is sent to the journal

☐ The response to peer reviewers' comments

☐ The correspondence with the editor during the evaluation process comments

Q29. Have you ever had any academic publications?

☐ Yes

☐ No

If yes, where have you published?

☐ In an international journal

☐ In a local journal

☐ In a book by an international publisher

☐ In a book by a local publisher

☐ In international conference proceedings

☐ In local conference proceedings

If you have any suggestions or comments, please feel free

……………………………………………………………………………………………

……………………………………………………………………………………………

الملخص

يواجه العديد من الباحثين الذين يتحدثون الإنجليزية كلغة ثانية عقبات عند إجراء بحث خصوصا عند كتابة ورقة علمية.تتطلب المجلات العلمية متطلبات صعبة مثل المستوى العالي من الكفاءة اللغوية التي يبدو من الصعب تحقيقها بالنسبة لهم. تبحث الدراسة الحالية في مواقف الباحثين الجزائريين بجامعة محمد خضر بسكرة تجاه اللغة الإنجليزية كلغة دولية للتواصل العلمي. يحتاجون إلى نشر أعمالهم باللغة الإنجليزية لأسباب عديدة مثل الترقية أو الاقتباس أو التخرج بينما تتطلب المجلات العلمية متطلبات صعبة حيث يبدو من الصعب تحقيق مستوى عالٍ من إتقان اللغة بالنسبة لهم. في هذا الصدد، يهدف هذا الاستطلاع إلى التحقيق في التحديات الرئيسية للباحث التي واجهها هؤلاء الباحثون لكتابة المنشورات الدولية باللغة الإنجليزية في المجلات العلمية المستهدفة والتحديات في الكتابة باللغة الإنجليزية لأغراض النشر البحثيلإلإجابة على الأسئلة السابقة تم اعتماد استبيان يتم من خلاله جمع بيانات الباحثين الدكتوراه لعينة هادفة من) ن1 = من مختلف التخصصات العلمية المرتبطة بجامعة محمد خيضر (النتائج   الكشف عنها هي مؤشر على حقيقة أن العلماء، الذين يرغبون في نشر نتائجهم في المجلات العلمية، يجب أن يتمتعوا بمستوى عالٍ في إتقان اللغة وأن يتبعوا معايير صارمة تناسب الجمهور المستهدف والتي يبدو من الصعب الحصول عليها بسبب التقدم مع اللغة الفرنسية وغياب تخصص اللغة الإنجليزية.