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## MOTIVATION FOR LEARNING ENGLISH FOR SPECIFIC PURPOSES (ESP) IN NATURAL SCIENCE FIELDS IN BURUNDI

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### **Abstract**

It is now unquestionable that motivation is a critical factor in language learning, especially in English for Specific Purposes (ESP). Thus, the present study was carried out to investigate Natural Science students' motivation for learning English. It examined whether the participants were aware of the global use of English and investigated why these students learn/need to learn that language. The study used a questionnaire to collect the data, hence a survey research design. A sample of 251 students was involved, and 173 responded appropriately to the questionnaire. The results indicated that students were moderately aware of the predominant worldwide use of English in critical domains. Regarding reasons for learning English, the findings revealed an instrumentally oriented motivation among students.

**Keywords:** Motivation, Natural science fields, ESP, Burundi

### **1. Introduction**

Today, English has become a de facto standard language for day-to-day

communication between people not sharing the same native tongue. Crystal (2003) refers to it as a "global language " and Marlina (2018) as a "global lingua franca ."As Crystal (2003, p. 189) comments, "there has never been a language so widely spread or spoken by so many people as English. Indeed," Chinese, Spanish, Arabic, French, Russian, German, etc., achieved a significant international status. However, they are not used to the same extent as the English language on a global stage. Indeed, as of 2021, it has around 1.35 billion speakers, either native speakers or second language speakers (Statistica, 2021).In his "English next," Graddol (2006) insists that English has joined the list of essential skills like knowing how to use computers and applications such as word processors, spreadsheets, and internet browsers. He argues that failure to master English as an essential skill means failure in other disciplines (p120).

The globalized use of English has made it the dominant language of science, technology, business, banking, finance, entertainment, internet, airline industry, tourism, etc. In science, the use of English has defined a new era. It is marked by the ability of scientists throughout the world to speak and write to each other, read each

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other's work directly, and collaborate without mediators of any kind (Montgomery,2013, p. xii). Over 90% of international communication in every form throughout the globe is done through the English medium (ibid.)

Given the spread of the English language worldwide, the need to learn that language among scientists is more significant than ever before. The knowledge of English is no longer a matter of prestige for learners; it is instead a deemed necessity. This necessity has affected the teaching and learning of that language. Indeed, English Language Teaching (ELT) has become a global activity and, to a large extent, a business and industry (Dua, 1994; Pennycook,1994, as cited in Al-Issa, 2006). Montgomery emphasizes this,2013, p. 13), reports that by 2010, the business of English-language teaching had become a \$50-billion-per-year global industry.

Today, much of the ELT industry addresses the academic and vocational needs of specific learners wishing to learn the language not as an end in itself but as a means to reach other goals. A branch of ELT that caters to specific learners' needs is mainly English for Specific Purposes (ESP). At its early beginning (in the 1960s), ESP was equated with EST (English for Science and Technology) since its early focus was directed to science and technology (Parkinson,2013). However, today, the range of purposes and contexts in which English is used has extended and has made ESP a diverse discipline. (ibid.)

One of the main features distinguishing ESP learners from General English (GE) learners is the motivation to learn the language. While the influence of motivation on language learning success is acknowledged in ELT literature in general (e.g., Dörnyei,1998; Gardner, 1985; Oroujlou&Vahedi, 2011; Stegmann, 2014), that influence becomes tremendous when it comes to ESP learners. ESP learners learn the language to achieve other goals (e.g., non-English biology students wishing to continue their studies in the UK).In addition to learning the technical terms about a particular field of study, ESP students will have to acquire other skills to function effectively in different academic and day-to-day communicative situations. Such skills may include making a good presentation, listening to a lecture, taking notes, reading scientific literature, etc.

The acquisition of such skills is a demanding task requiring high motivation. However, this is not always the case. ESP learners 'motivation varies from one discipline to another and from one country to another. For example, as Brown (2000) explains, in an EFL (English as a Foreign Language) context, where students enter the university with a bit of English background, the motivation of students for learning the language is not as high as that international student studying in an English-speaking country where English is the medium of instruction.

In the context of the present study, learners (Natural Science students) have a French language background. They learn English in the context of Expanding Circle [to use

Kachru's (1986) term], wherein English is rarely used, even by those who know it. Besides, they share one native language, Kirundi, making it possible to communicate without resorting to foreign languages. There is a genuine chance that their motivation will be fragile in such a context.

As the field of ESP in Burundi is still under-researched, no study has yet investigated how Natural Science students are motivated to learn English in such a context. Therefore, this study is intended to bridge the gap by examining why these students learn/need to learn the English language. It will first investigate whether they are aware of the current position and status of English in the world. As one of the critical facets of ESP needs analysis, an understanding of Natural Science students' motivation for learning English will help make the ESP courses more appropriate to the needs of these students. By raising awareness of the global status of English, the study is expected to change the students' attitudes towards English in a positive direction. The study will largely contribute to the body of knowledge – being among the few that deal with Natural Science students.

## **2. English for Specific Purposes (ESP)**

The field of English for Specific Purposes (ESP) emerged in the 1960s and is now acknowledged as a separate branch of English Language Teaching (ELT). It is used as an umbrella term to refer to the teaching of English for all specific purposes, such as academic, occupational, or professional purposes (Basturkmen, 2017). Anthony (2018) provides a very

recent definition of ESP. It reads as follows:

English for specific purposes (ESP) is an approach to language teaching that targets the current and future academic or occupational needs of learners, focuses on the language, genres, and skills to address these needs, and assists learners in meeting these needs through the use of available and/or discipline-specific teaching materials and methods. (Anthony, 2018, pp.10-11) [emphasis is added]

A simple analysis of Anthony's definition indicates that the term 'needs' is used thrice. This shows that ESP is different from General English in that ESP is designed to meet the specific needs of learners. In line with this, Hutchinson and Waters (1987), among the pioneer researchers in ESP, believe that the foundation of all ESP is the simple question: why does this learner need to learn a foreign language? They define ESP as an approach to language teaching in which all decisions as to content and methodology are based on the learner's reason for learning (Hutchinson & Waters, 1987, p 19). Thus, needs analysis is the initial stage in ESP course development. It is considered the cornerstone of any ESP course development (Brown 2016; Basturkmen 2010; Otilia 2015; Rahman 2015). For Brown (2016), 'needs analysis and ESP are inextricably intertwined.'

Due to the increasingly globalized world, the situations in which learners feel the need to use and hence learn English have increased dramatically. As Anthony (2018) explains, ESP is now one of the most established approaches in ELT and is

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probably the most influential of all approaches in academic settings and the workplace

### **3. Motivation in Language Learning**

Any human activity involving energy, time, and perseverance requires a certain level of motivation for its success. The term motivation is heard in the military, business, sport, learning (e.g., language learning.), etc. Given that the term is mentioned in many human activities, its meaning can quickly be taken for granted. However, as Al-Tamimi and Shuib (2009) analyzed, scholars view the term motivation differently depending on their school of thought.

On the one hand, those who take a behaviouristic perspective define motivation as anticipating a reward (Brown, 2000, 168). In this sense, the individual is driven to acquire positive reinforcement by the previous experiences of reward for the behavior. On the other hand, scholars adopting a cognitive perspective views motivation in terms of individual decisions, that is, "the choices people make as to what experiences or goals they will approach or avoid, and the degree of effort they exert in that respect" (Keller, 1983, p.389, as cited in Brown, 2007, p 169). A third view of motivation is that taken by constructivists. They emphasize social context as well as individual personal choices. (Williams & Burden, 1997, cited in *ibid*). As such, each person is motivated differently and will therefore act on her/her environment in unique ways.

In language learning, the subject of motivation has attracted the attention of many scholars (see, for example, Dörnyei & Zoltan, 1990; Dörnyei & Zoltan (1998), Gardner & Robert, 2007). Indeed, according to McDonough (1983, p. 142), the students' motivation is one of the most important factors influencing their success or failure in learning the language. Gardner (2006, p. 241) observed that students with higher motivation levels would do better than students with lower levels. The same author explains that "if one is motivated, they have reasons (motives) for engaging in the relevant activities, expend effort, persist in the activities, attend to the tasks, show a desire to achieve the goal, enjoys the activities, etc." (Gardner, 2006, p. 243). It can be seen that motivation is a complex construct involving many facets.

### **4. Instrumental Vs. Integrative Motivation**

In the literature on motivation in language learning, a distinction is often made between two major types of motivation: instrumental and integrative motivation. This typology was first proposed by Gardner and Lamber (1972). As Hutchinson and Waters (1987) comment on these two types, instrumental motivation reflects an external need. This means that learners learn the language not because they simply want to but because they need to. To put it differently, a student is instrumentally motivated when he/she learns a language to be able to study other disciplines using the language, get a better job, pass an examination, travel abroad, etc. (Taken in this perspective, learning the language is not

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the primary goal; it is instead a means by which learners reach their professional or personal goals (Tomak&Šendula-Pavelić, 2017, p.154).

As far as integrative motivation is concerned, it stems from a desire for learners to be members of a speech community that uses a particular language (Hutchinson & Waters, 1987). It comes from within rather than from an external need. In this sense, students learn a language because they wish to identify themselves with or become integrated into the society of the target language (Gardner, 1983, p.203, cited in Al-Tamimi & Shuib, 2009). The main reasons for learning a foreign language are assimilation with the target language community and culture and perhaps a solid emotional interest in the speaker of that foreign language (Tomak&Šendula-Pavelić, 2017, p.154).

The present study investigated the instrumental motivation of Natural Science students in the Burundi ESP context. The reason is that, as Guerid (2015) argues, most ESP learners have this type of motivation of their desire for learning English after discovering that a good command of English can be a key to opening the way to rewards and promotion. Thus, this study first examined whether they are aware of the widespread use of English in many critical domains in general and in science and research in particular. It is essential to understand whether these students perceive the value (or reward) of learning the language. This is because students may not be motivated to learn a foreign language because they

fail to see the rewards as they connect the learning to superficial needs like fulfilling a requirement and therefore see no possibility of a social context in which the language will be helpful to (Brown, 2007, p 169)

## **5. Previous Related Studies**

Although motivation studies in language learning are conducted at all levels of education, the related studies presented here are those conducted at the tertiary level. They are given in reverse chronological order. Jafari Pazoki and Alemi (2019) conducted a study on Engineering students' motivation to learn technical English in ESP courses and hence investigated teachers' and students' perceptions at three Iranian state Universities. Their study adopted a mixed-methods design and was conducted in two phases. The results indicated that Engineering students were motivated to develop technical English knowledge and skills to achieve their future goals rather than satisfy their immediate obligations. Students' future goals require English technical competence in all four skills.

Manzoor, Awan, and Jawed (2017) published a study on attitudes and motivation of Management sciences students towards ESP courses. Their study was conducted in three Pakistani public sector universities and used a questionnaire as the instrument for data collection. The study included 150 participants who were selected using simple random sampling. The study's significant findings indicated that students had a high level of integrative motivation for the English course among all the types

of motivation. The results also indicated that most of the students within the universities displayed positive attitudes towards their English courses.

Tomak and Šendula-Pavelić(2017) carried out a study on students in medical and healthcare studies at the University of Rijeka in Croatia. The study was intended to determine whether students have become aware of the increasing need for English language knowledge and, therefore, whether they were motivated to learn ESP (Medical English in this case). It included a total number of 242 final years and employed a questionnaire to collect data. The significant findings revealed that students in medical and healthcare studies were more integratively motivated to learn English.

Guerid (2015) published a study on enhancing students' level of motivation in learning English: The study was conducted on first-year students of the Preparatory School of Economics, Commerce and Management Sciences of Annaba in Algeria. The researcher employed a questionnaire as a tool to collect data. One of the conclusions he drew was that when students go up to the final years of their studies, they will start thinking of where to work and will therefore find out that the majority of companies prefer English-speaking competence predominantly; it is at this level that they will be highly aware of the importance of English.

Al-Tamimi and Shuib (2009) investigated Petroleum Engineering undergraduate students' motivation and attitudes towards learning the English language at Hadhramout University of

Sciences and Technology in Malaysia. Using a questionnaire, they examined 81 petroleum engineering students' motivation in three motivational constructs (instrumental, integrative, and personal motivation). The significant findings of their study revealed that students were predominantly driven by instrumental orientation, though personal reasons for learning English were also reported to be very important.

Vaezi (2008) published a study on language learning motivation among Iranian undergraduate students. The study focussed on the integrative and instrumental aspects of motivation. The research included 79 non-English primary students and used a questionnaire as a tool for data gathering. The results indicated that students had very high motivation and positive attitudes towards learning English. These students were more instrumentally motivated.

A critical analysis of the studies mentioned above shows that they were conducted in different contexts (e.g., Algeria, Pakistan, Croatia, Malaysia). However, they were all carried out at the tertiary level. Besides, they were conducted in disciplines other than Natural Science. The present study pays particular attention to students in Natural Science fields in Burundi.

## **6. Methodology**

This study adopted a quantitative approach and thus a survey research design. The participants in this study were second-year Natural Science students at

the University of Burundi (UB) and Ecole Normale Supérieure (ENS, "Higher Teacher Training College"); these students have compulsory English courses in their first and second years. They participated in this study after completing the English course in the second year. The data were collected using a questionnaire. The questionnaire collected information about participants' awareness of the status of the English language worldwide and about their reasons for learning English.

As the total number of second-year natural science students was 417, the researcher had to determine first how many of these students would be selected to constitute a representative sample. The researcher used an online sample size calculator owned by Survey Monkey (see <https://www.surveymonkey.com/mp/sample-size-calculator/>). The representative sample from the 417 students turned out to be 201 students. However, assuming that the response rate would be 75%, the sample size was increased to 252. The

students were selected using an online randomizer

(<https://www.randomizer.org/>). Out of 252 questionnaires distributed, 173 valid copies were returned.

The collected data were coded and processed using a statistical data analysis tool (IBM SPSS, version 22). They were then analyzed using descriptive statistics.

## 7. Results and Discussion

### 7.1. Students 'Awareness of the Worldwide use of the English Language.

To examine the students' awareness of the status of the English language, they were given ten statements describing the major international domains in which English is dominantly used. They were given three choices to respond (Yes, NO, Not sure). Most of the statements were adapted from Graddol's (1998, p. 8) "The future of English," published by the British Council. The results are presented below.

Table 1: Students 'Awareness of the Status of English Language Worldwide

N°	Statements	Yes	No	Not Sure	Total
		%	%	%	%
1	English is an international language of science and research.	65.9	17.9	16.2	100
2	There is an increase in the use of English as a medium of instruction worldwide, especially in tertiary education.	54.1	19.8	26.2	100
3	English is closely associated with leading-edge technology.	61.6	15.7	22.7	100
4	English is the working language of international organizations and conferences.	62.6	20.5	17.0	100

5	English is the working language of international banking, economic affairs, and trade.	54.1	19.8	26.2	100
6	English is the global language of internet/electronic communication	52.3	27.9	19.8	100
7	English is the working language of international law.	37.2	27.3	35.5	100
8	English is the language of international tourism.	48.8	19.6	31.5	100
9	English is a global lingua franca, that is, the language used for communication between people whose native languages are different.	51.2	37.1	11.8	100
10	English is the number one international language of publishing.	44.5	30.1	25.4	100
<b>Average</b>		<b>53.2</b>	<b>23.6</b>	<b>23.2</b>	<b>100</b>

The results presented in Table 1 indicate that the average percentage of students who responded by "Yes" to the ten statements is slightly higher than 50%. This shows that students who participated in this study were moderately aware that English is the dominant language used in many vital domains. For example, many students still did not know (or were not sure) that English is the primary international language of scientific publication, nor did they know that it is a global language of the tourism industry and international law.

This lack of complete awareness among students is probably attributed to the status of the English language in Burundi. Although it has been declared an official language in Burundi since 2014, English still does not enjoy effectively such a status (Clément, Constantin & Pierre, 2020). Besides, Burundi is the only

country in East African Community (EAC), officially Francophone. This might cause some students to hold a myopic view of the uses they can make of the English language now or in the future. Therefore, there is a need to increase students' awareness in such a context. The idea of increasing awareness among students contrasts with Guerid's (2015) position on the issue. This scholar posits that there is no need to talk about the level of awareness about the importance of English as the population is mature enough and fully aware of their purpose from the English course. He continues to argue that when students go up to the final years of their studies, they will start thinking of where to work and find out that most companies prefer English-speaking skills predominantly. However, in contexts where no major companies are using English (like Burundi), leaving the

students' awareness to develop on its own would not be judicious.

## 7.2. Students' Perceptions of the Reasons for Learning English in Natural Science Fields

To examine students' views on motivation to learn English in Natural

Table: Students' Perception of Reasons for Learning English Language

Science fields, they were given 13 statements describing the instrumental reasons for learning that language. They were then asked to respond by choosing between "Yes," "No," and "Not Sure ."The results are presented respectively inTable 2 below.

N°	At university, I study/should study English....	Yes	No	Not Sure	Total
		%	%	%	%
1	Because I will need English to travel abroad.	85.5	9.3	5.2	100
2	Because English will give me more job opportunities in the East African Community (EAC) and elsewhere	79.8	12.7	7.5	100.
3	Because I will need to discuss with foreign specialists in my domain	78.5	9.3	12.2	100
4	Because English is the most spoken second language in the world	69.8	17.4	12.8	100
5	Because I would like to work in international companies	63.7	21.1	15.2	100
6	Because I plan to continue my studies abroad at English medium universities	61.8	23.1	15.0	100
7	Because I intend, in the future, to publish in English	61.8	18.8	19.4	100
8	To access academic and scientific sources (books) published in English.	59.9	27.9	12.2	100
9	Because English is a gateway to the world of science, commerce, and culture	46.5	27.1	26.5	100
10	To increase the chance to get a scholarship to study abroad.	44.7	37.1	18.2	100
11	Because if I learn English, I will become better educated.	40.7	27.3	32.0	100

12	Because English is a global language of science	39.6	45.0	15.4	100
13	Because I just need it to obtain my university degree.	25.4	57.8	16.8	100
	<b>Average</b>	<b>58.3</b>	<b>25.7</b>	<b>16.0</b>	<b>100</b>

Table 2 above shows that 8 out of 13 items obtained a Yes-answer percentage greater than 59%. This means that students were instrumentally motivated. However, it has to be noted that their motivation was still not high (the average percentage of Yes-answers is equal to 58.3). This is probably due to their moderate awareness of the position of the English language worldwide.

The findings of his study corroborate those of Jafari Pazoki and Alemi (2019), Al-Tamimi and Shuib (2009), and Vaezi (2008). These scholars reported that participants in their studies were instrumentally motivated. On the contrary, the present study's findings are different from those of Tomak and Šendula-Pavelić (2017) and Manzoor, Awan, and Jawed (2017). The participants in these studies were reported to have a high level of integrative motivation.

## 8. Conclusion

The importance of motivation in language learning can now hardly be disputed. Thus, the present study investigated students' motivation for learning English in Natural Science fields in Burundi. It first examined the extent to which they are aware of the spread of English worldwide. The significant findings indicated that students were moderately aware of the predominant

worldwide use of English in critical domains. This is probably because these students learn English in an environment where the language is rarely used, even by people who know it. Regarding reasons for learning English, the results indicated an instrumentally oriented motivation among the participants.

As this study was conducted on Natural Science students, future scholars could extend it to other disciplines since English is now taught in all non-linguistic departments in the country. Besides, the present study dealt with one facet of motivation (instrumental reasons). It is suggested that further research be carried out to explore other characteristics of motivation in the Burundi ESP context.

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