



Retaining Science Students in the Second Cycle of the Special Bilingual Education Program in Cameroon: A Case for the Teaching of French for Specific Purposes/*Français Sur Objectifs Spécifiques*

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Abstract

This paper examines the Special Bilingual Education Program (henceforth, SBEP) in Cameroon which aims to promote English-French bilingualism among students. It highlights the shortcomings of the program, particularly the literary bias in the curriculum, which leads to the dropout of science-inclined students in the second cycle. The paper proposes replacing the general French-oriented *Français Intensif* with French for Specific Purposes (henceforth, FFSP) to retain science students in the program. The paper argues that the teaching and learning of FFSP would better address specific needs of each series at the second cycle of the SBEP and make the program more appealing to science students. Drawing on Spolsky, Green, and Read's model for the description, analysis and evaluation of bilingual education (1976), a purposive sample of 45 respondents, including 24 SBEP learners, 18 SBEP teachers and 3 examiners of the General Certificate of Education, GCE Advanced Level Special Bilingual Education French was selected. Data were collected through semi-structured interviews. The documentary research technique enabled the collection of data from GCE Advanced Level Special Bilingual Education French yearly subject reports. The analysis of data collected revealed that after the GCE Ordinary Level Special Bilingual Education French, many science-inclined students abandon the SBEP in the second cycle owing to its literary content orientation. Research findings also revealed that SBEP stakeholders were unanimous on the use of FFSP instruction as a tool to retain science-inclined in the SBEP. On that score, this paper proposes a revision of the GCE Advanced level SBEP curriculum in view of a practical teaching and learning of French for

sciences. The proposed curriculum design aligns with the current five GCE Advanced Level scientific fields combinations: S1, S2, S3, S4 and S5.

Subject Areas

Education, Linguistics

Keywords

French for Specific Purposes, Bilingual Education, Learner Dropout

1. Introduction

Cameroon adopted an English-French official bilingualism policy in October 1961 following the reunification of West Cameroon that was administered under the British colonial rule with East Cameroon that was administered under the French colonial rule. The 1961 federal constitution of the Federal Republic of Cameroon recognized the two inherited colonial languages, English and French, as official languages of equal status. In order to consolidate national unity within the young Federal Republic of Cameroon, president Ahmadou Ahidjo embarked on the promotion of an English-French official bilingualism policy in school. President Ahmadou Ahidjo created in 1963, as a pioneer measure, the first ever bilingual education school in Cameroon that was referred to as the Federal Bilingual Grammar School Man O War Bay Victoria. At the start of each school year, 35 young Cameroonians from East Cameroon and 35 counterparts from West Cameroon were admitted into the Federal Bilingual Grammar School Man O War Bay bilingual education experiment through a competitive entrance examination. After four years of intensive English and French courses and full immersion in content subjects taught through the medium of these languages, all the Man O War Bay Victoria students were expected to take the *Brevet d'Études du Premier Cycle* (henceforth, BEPC) examination. The bilingual experiment registered very encouraging results during the 1968 maiden BEPC examination.

Curiously, in the fifth year of the experiment, while all the bilingual students from the two federated States were expected to take the London Ordinary Level General Certificate of Education, only English-speaking West Cameroonian students took the examination. To the dismay of West Cameroonian students, their French-speaking East Cameroonians did not take the examination. As reported by several scholars, Echu [1], Echu [2], Echu & Grundstrom [3], Ekane [4], Ekane [5], Fonlon [6], Fonlon [7], Fonlon [8], Ropa [9], Ngamassu [10], Ngamassu [11], Courade & Courade [12], and Kouega [13], West Cameroonian Man O Bay Victoria students became frustrated and strongly believed that they were being used as guinea pigs for a dubious experiment the aim of which was to frenchify them. These feelings of frustrations inevitably led to the collapse of the Federal Bilingual Grammar School Man O War Bay Victoria bilingual education experiment.

In a nostalgic attempt to replicate the Federal Bilingual Grammar School Man O War Bay Victoria bilingual education model, Cameroon's Ministry of Secondary Education, through *Circular Letter No. 28/08/MINESEC/IGE/* of 02 December 2008, created a partial immersion program referred to as the *Special Bilingual Education Program* (henceforth SBEP). The SBEP was created as part of measures for the promotion of effective bilingualism in public and private secondary general, technical and teacher-training institutions. According to the outcomes of the SBEP as outlined in the circular letter, the SBEP, "aims at producing perfectly bilingual students who master English and French irrespective of their original education sub-system" (Bapes-Bapes, 2008:1) [14].

In terms of the objective pursued, the SBEP serves as a veritable platform for the mastery of one of the two official languages by learners. According to the Circular letter, "the Special Bilingual Education Program gives the learners greater opportunities for using the other official language, thereby contributing to its mastery". As far as the composition of the SBEP is concerned, it comprises three compulsory modules.

▪ **Module 1: Intensive English/ Intensive French**

This intensive language module is expected to strengthen the English language and French language levels of learners so that they can be able to learn content subjects enshrined in the immersion module. French-speaking learners are subjected to *Intensive English* while English-speaking learners are subjected to *Français Intensif* (Intensive French). The intensity of the languages taught lies in the inclusion of a literary component to the language courses offered. Learners are subjected to literary concepts and reading of authentic literary materials. To Intensive French is added the component *Initiation à la littérature*, while to Intensive English is added the component *Literature awareness*. This literary component makes Intensive French and Intensive English different from core or classical English and French courses taught in non-SBEP classrooms.

▪ **Module 2: Cross-curricular Immersion**

This module lends credence to the bilingual education or immersion option of the SBEP. It involves the teaching and learning of content subjects or non-linguistic subjects in French and English. That is, teaching and learning of some school subjects through the medium of English and French. The SBEP is a partial immersion model given that only three disciplines are taught through the medium of French and French: 1) Citizenship to Francophones, *Éducation à la Citoyenneté et à la Morale* (ECM) to Anglophones, 2) Sports and Physical Education to Francophones, *Éducation Physique et Sportive* to Anglophones and 3) Manual Labour to Francophones, *Travail Manuel* to Anglophones.

▪ **Module 3: Co-curricular Activities**

This module serves as a platform for the exercise, out of the classroom setting, of linguistic skills acquired by SBEP learners. Learners are expected to demonstrate these skills during debates, club activities, etc.

Since going operational in 2009, the SBEP has been going through certificate

examinations organized by the *Office du Baccalauréat du Cameroun* (OBC) and the General Certificate of Education Board, GCEB. In the francophone sub-system of education, francophone SBEP learners, since 2013, have been sitting the *BEPC bilingue*, the *Probatoire bilingue* and the *Baccalauréat Bilingue* examinations. In the Anglophone sub-system of education, SBEP learners, since 2014, have been sitting the General Certificate of Education (GCE) Ordinary Level Special Bilingual Education French and the General Certificate of Education (GCE) Advanced Level Special Bilingual Education French since 2016. This study is interested in the implementation of the SBEP in the Anglophone sub-system of education.

2. Statement of the Problem

Preliminary findings carried out in SBEP pilot schools in the Anglophone sub-system of education reveal that after obtaining the GCE) Ordinary Level Special Bilingual Education French, many candidates often abandon the SBEP when they get to the second cycle. According to subject reports of the GCE A/L SBEF, this examination paper has been witnessing a steady drop in the number of SBEP candidates registered each year. For example, on the organization of the 2024 June session of the GCE A /L Special Bilingual Education French paper, the subject report reads thus:

The marking of the 2024 GCE examinations was smooth. The number of candidates (62) was about the same as last year. The panel is still wondering about the future of this subject if something is not done fast at the level of MINESEC and its various Pedagogic Inspectorates” (2024 SUBJECT REPORT FOR 0746 SBE FRENCH).

Based on the above preliminary findings, this study seeks to answer the following specific questions:

- 1) What are the current statistical trends of learner dropout from the SBEP since 2016?
- 2) Why do many SBEP candidates abandon this program in the second cycle?
- 3) What are GCE SBEF examiners’ perceptions of the SBEP curriculum vis-à-vis learner dropout?
- 4) Is the SBEP curriculum inclusive enough to meet the needs of both literary and science -inclined students?
- 5) Does the *Français Intensif* component of the SBEP meet the language needs of learners?
- 6) What do GCE SBEF examiners think should be done to retain science-inclined students in the SBEP in the second cycle?

3. Review of Related Literature

Very few works have been carried out so far in Cameroon on the implementation of the SBEP. Nkongho Ayuk (2022) [15] views the creation of the SBEP as a pio-

neering step in the harmonization of the English and the French subsystems of education. The analysis of her data gotten from SBEP pilot schools revealed that the number of students found at the exit is far less than at the entry. In order for the SBEP to enhance the harmonization of the Cameroonian system of education, Nkongho proposed a strategic selection of courses across both the Science and the Arts Series. This paper, like the work of Nkongho, identifies the non-selection of scientific content subjects as a setback to the enrolment of science students in the second cycle of the SBEP but goes further to propose an alternative measure to the inclusion of science subjects: the teaching of FFSP in the place of the *Français Intensif* component.

Kouega and Dempowo (2022) [16] evaluated the implementation of the SBEP in terms of the attainment of one of its outcomes which was to produce “perfectly bilingual students who master English and French irrespective of their original education sub-system” (Bapes-Bapes, 2008:1). The analysis of their data revealed that the SBEP has so far fallen short of producing perfect bilingual learners at the time of their exit from the program. In order to turn the tides, Kouega and Dempowo proposed a new program likely to produce more bilingual students in record time. Their work does not consider the non-selection of scientific content subjects as one of the problems inherent in the implementation of the SBEP.

Nkongho (2022) [17] undertook a doctoral research work on the implementation of the SBEP in Cameroon. Her work was triggered by the observation that seven years after creation, the SBEP was unable to attain one of its major outcomes of producing a crop of perfect bilingual Cameroonians. The author then set out to identify loopholes in the SBEP and how these could be filled to enable the success of the implementation of the SBEP. The analysis of her data gotten from SBEP stakeholders revealed that some of the SBEP’s challenges have to do with students’ enrolment and massive dropout from the program after the first cycle. The author identified the exclusion of scientific content subjects from the SBEP as one of reasons for the high rate of dropout from the program in the second cycle. Nkongho Ayuk proposed that the SBEP be spanned to include both Arts and Science series.

Similarly, Safotso and Gamgne (2024) [18] questioned the marginalization of scientific content subjects in the SBEP. The analysis of their data collected from SBEP stakeholders revealed that science-inclined students who enrol into the SBEP and intend to pursue scientific studies in the second cycle are obliged to quit the program after the *BEPC Bilingue* and the GCE Ordinary Level Special Bilingual Education French examinations. The authors recommended the inclusion of science subjects into the SBEP for the benefit of technical students. Like Nkongho Ayuk (2022) and Safotso and Gamgne (2024), this paper identifies the non-inclusion of scientific content subjects as a factor for the massive dropout from the program in the second cycle of the SBEP. It does not stop at advocating the inclusion of science subjects. It goes further to propose the teaching of FFSP in the place of the *Français Intensif* component as an alternative measure. Furthermore, instead of examining the phenomenon of learner dropout in both subsystems as

did Safotso and Gamgne (2024), this paper examines only the anglophone subsystem of education in a bid to do an in-depth analysis of the situation.

4. Theoretical Framework

In turn, this section examines Spolsky, Green, and Read's Model for the description, analysis and evaluation of bilingual education (1976). Finally, it looks at the theoretical basis of the teaching of French for Specific purposes.

4.1. Spolsky, Green, and Read's Model for the Description, Analysis and Evaluation of Bilingual Education (1976)

This paper draws on a comprehensive framework for describing, analysing and evaluating the implementation of a bilingual education program developed by Spolsky, Green, and Read (1976) [19] dubbed: *A Model for the Description, Analysis and perhaps Evaluation of Bilingual Education*. The authors' model serves as a decision-making tool for administrators of bilingual education programs. The model is structured around three interconnected hexagons. Each hexagon comprises six sets of factors: psychological, sociological, economic, political, religious-cultural, and linguistic factors. Each hexagon represents three different levels of analysis. Firstly, the *Situational Level* which looks at the context in which the bilingual education program operates; secondly, the *Operational Level* that looks at factors affecting program implementation which can be addressed by administrators: resources, constraints, and the program's potential contributions to the community. Finally, the *Effects Level* that evaluates the outcomes of the bilingual education program on both individual participants and the broader community. This paper is interested in the Operational Level and the Effects Level of the implementation of the SBEP.

4.2. Teaching of French for Specific Purposes/*Français Sur Objectifs Spécifiques*

From a diachronic perspective, this section examines the historical evolution of the teaching of French for specific purposes. It also provides empirical evidence from the literature on the usefulness of the teaching of FFSP as a didactical option capable of retaining science-inclined students in the second cycle of the SBEP.

4.2.1. Historical Evolution of French for Specific Purposes

The teaching of FFSP has undergone several changes and denominations in its history, changes brought about by economic, political and social considerations (Hsin-I Lee, Mun Wui Wong & Yiru Xu, 2018) [20]. According to Carras, Tolas, Kohler and Szilagyi (2007) [21], the teaching of FFSP has witnessed 5 periods in its history. In the 1920s, *Military French* came up. Intended for non-French soldiers, it was taught using the direct method. In the 1960s, *French in Special Use* succeeded Military French. Intended for professional learners, the teaching of *French in Special Use* focused on the lexicon. Then came the 1970s when *Scientific and Technical French* succeeded French in Special Use. Scientific and Technical

French was intended for scientists and was taught using the audiolingual method. In the same period, Scientific and Technical French soon gave way to *Functional French*. Intended for interns of the French government, Functional French emphasised the functional and communicative approach to language teaching and learning. After the use of Functional French, came *Instrumental French* in Latin America. With students and researchers as target learners, Instrumental French focused on developing learners' access to the written scientific and technical documentations.

Finally, since the 1990s, French language pedagogy has been characterised by the rise of FFSP which has known several denominations: *Specialised French*, *Professional French/Language of Professionals*. Meant for professionals, students and researchers, FFSP is being taught using the communicative approach.

4.2.2. French for Specific Purposes Instructional Framework

According to Cuq (2003) [22], the teaching of French for Specific purposes which was developed in Latin America in the 1970s came out of the need to tailor French language teaching to the needs of adult learners wishing to perfect their French language skills in a professional domain. The teaching of FFSP seeks to facilitate the access of learners to linguistic know-how in duly identified academic or professional areas of communication. The first in teaching entails doing language needs assessment of the different targeted communication situations (Mangiante & Parpette, 2004) [23].

The results of this language needs assessment survey will serve as the basis for the development of a meaningful teaching curriculum. Cuq (2003) considers two formats of developing a program for the teaching of French for specific purposes: the first consists of developing a one-on-one teaching program based on the needs clearly expressed by a given target audience. The second format consists of developing a teaching program not based on needs expressed by a given target audience but on a general language needs assessment survey of different communication contexts specific to a profession or a discipline. This study is interested in this second format.

5. Methodology

This adopts a quantitative and qualitative research design. Its population includes students and teachers of some six SBEP pilot schools in the South West Region of Cameroon as well as examiners of the GCE Advanced Level Special Bilingual Education French (henceforth, GCE A/L SBEF). A purposive sampling technique was used to select 45 respondents, comprising 24 SBEP learners, 18 SBEP teachers and 3 GCE A/L SBEF examiners (**Table 1**).

Data were collected through semi-structured interviews and documentary techniques. The semi-structured interviews allowed for the collection of qualitative data on learners', teachers' and examiners' experiences and perceptions of the implementation of the SBEP. These qualitative data were thematically analysed. The documentary technique allowed for a reduction in researcher bias through a focus

on original sources from the GCE A/L SBEP yearly subject reports and SBEP-related ministerial circulars. This technique equally allowed for in-depth historical analysis of examination results trends with regards to candidates' performance and enrolment.

Table 1. Distribution of respondents.

S/N	SBEP Pilot School	Students	Teachers	Examiners	Total
1	Bilingual Grammar School Molyko-Buea	4	3		
2	Government Bilingual High School Muea	4	3		
3	Government Bilingual High School Mutengene	4	3	3	
4	Government High School Limbe	4	3		
5	Government High School Bokwaongo	4	3		
6	Government Bilingual High School Tiko	4	3		
	Total	24	18	3	45

Source: Our field survey, January 2025.

The scope of this study is limited to the Anglophone subsystem of education. This choice is purposive. As earlier stated above, this study comes after that carried out by Safotso and Gamgne (2024) in which the researchers examined the phenomenon of SBEP learners' dropout in both the Anglophone and Franco-phone subsystems of education. Firstly, the choice of a single subsystem of education allows for an in-depth understanding of the phenomenon of SBEP learner dropout in the second cycle. Secondly, our familiarity with or knowledge of the context of the teaching of French in the Anglophone subsystem of education also justifies our choice of the Anglophone subsystem for this study¹.

6. Presentation of Findings

In this section, the results obtained from the analysis of semi-structured, interviews and documentary sources are presented in turn under five axes: 1) current trends in learner drop-out from the SBEP since 2016; 2) SBEP teachers' perceptions of the SBEP curriculum vis-à-vis learner dropout; 3) SBEP learners' perceptions of the Program: their reasons for dropping out; 4) GCE SBEP examiners' perceptions of the SBEP curriculum; 5) GCE SBEP examiners' recommendation of FFSP instruction to curb learner dropout.

¹An English-speaking Cameroonian from the North West Region of Cameroon, we studied French as a foreign language within the anglophone subsystem of education. After obtaining the GCE Advanced Level in three subjects (French, History and Literature), we proceeded to the University of Yaounde where we read Bilingual Letters (English & French). After our Bachelor's Degree in Bilingual Letters, we proceeded to the Higher Teachers' Training College of University of Yaounde from where we graduated with a Postgraduate Diploma in the teaching of English and French. We were then posted to Government Bilingual High School Muea-Buea, South West Region, where we became the pioneer Focal Point for the SBEP and a teacher of *Français Intensif* from 2008 to 2019 in the same school. In 2018, we defended a Ph.D. in French Language and Linguistics with specialisation in didactics of French as a Foreign/Second language, at the University of Buea.

6.1. Current Trends in Learner Drop-Out from the SBEP since 2016

An analysis of the data collected from subject reports of the GCE A/L SBEP reveal a drastic decrease in the enrolment of candidates into the second cycle of the SBEP from 2016 till date. According to SBEP-T2 (a code used for purposes of anonymity; a female teacher of sports and physical education in French, six years of teaching experience in the SBEP and a GCE Ordinary Level Special Bilingual Education French examiner), “the number of students in the second cycle of the Special Bilingual Education Program keeps decreasing every year” (Table 2).

Table 2. Statistical trends in learner dropout from the SBEP since 2016.

GCE O/L SBEP		GCE A/L SBEP since 2016			
Year	N° enrolled	Year	N° enrolled	N° dropouts	Dropout rates
2014	1325	-	-	-	-
2015	1500	-	-	-	-
2016	1340	2016	60	1280	95.52%
2017	1200	2017	38	1162	96.83%
2018	807	2018	69	738	91.44%
2019	1310	2019	60	1250	95.42%
2020	1281	2020	37	1244	97.11%
2021	1290	2021	79	1211	93.87%
2022	1289	2022	100	1189	92.24%
2023	1296	2023	52	1244	95.98%
2024	1349	2024	59	1290	95.62%

Sources: Subject Reports of 0746 GCE A/L SBEP.

Table 2 above indicates that the pioneer batch of students of the SBEP sat the GCE Ordinary Level Special Bilingual Education French (henceforth GCE O/L SBEP) in the June 2014 session of the examination. From 2014 to 2024, enrolment of candidates into the GCE O/L SBEP throughout the whole country has witnessed a steady rise, above one thousand candidates, except for the June 2018 session that witnessed a drop in enrolment, owing to the escalation of the armed conflict in the two English-speaking regions of Cameroon.

In 2016, at the start of the ongoing anglophone crisis in Cameroon, the first batch of SBEP students sat the GCE A/L SBEP for the first time. From 2016 to 2024, there has been a drastic drop in student enrolment into the second cycle of the SBEP. The consequence of this drop has been the low registration rates for the GCE A/L SBEP. Registration has been witnessing soaring dropout percentages that have stood above 90% since 2016. Students have been dropping out of the SBEP in the second cycle in their thousands. The lowest number of dropouts was registered in 2018 when the dropout rate went below a thousand.

6.2. SBEP Teachers' Perceptions of the SBEP Curriculum vis-à-vis Learner Dropout

SBEP teachers interviewed blamed the abandonment of the SBEP in the second

cycle by students on the literary orientation of the SBEP curriculum. According to SBEP-T1 (a code for purpose of anonymity; a male teacher of citizenship in French with five years of teaching experience), the SBEP's literary curriculum does not favour Ordinary Level students who intend to pursue studies in scientific series in the second cycle:

Many students abandon the Special Bilingual Education Program in the second cycle for several many reasons. The first is the non-existence of a science Special Bilingual Education Program in the second cycle. Most of the students who are following the Special Bilingual Education Program in the first cycle are the best students. These students usually switch to science series in high school because there is no science series for those who did the Ordinary Level Special Bilingual Education Program. There is a crucial need for students to do scientific series in high school that the SBEP does not offer. It is obvious that science subjects offer more opportunities than arts subjects.

In the same line of thought, SBEP-T2 (a female teacher of Sports and physical education in French, six years of teaching experience in the SBEP) blames students' abandonment of the SBEP on their penchant for sciences:

There are no students at the level of the GCE Advanced Level because the Special Bilingual Education Program has no science classes. The best students in the bilingual program have a penchant for sciences. When they reach the second cycle, they realize that the bilingual program does not accommodate science subjects. They are obliged to drop the program and pursue their career dreams in the scientific series.

6.3. SBEP Learners' Perceptions of the Program: Their Reasons for Dropping out

SBEP learners interviewed advanced many reasons for abandoning the bilingual program in the second cycle.

6.3.1. The SBEP's Literary Bias and Learners' Penchant for Scientific Fields

The first reason advanced had to do with the marginalization of science subjects in the SBEP curriculum. Many of the students who had a penchant for the sciences realized that scientific fields of study in the second cycle could not accommodate the SBEP because of the latter's literary orientation. According to SBEP-S1 (a code for purposes of anonymity, a male student, in the Lower sixth Form in the S1 series, studying chemistry, physics, pure mathematics with mechanics, and pure mathematics with statistics), his penchant for scientific fields caused him to abandon the SBEP:

The first reason was the choice of subjects in the high school. I wanted to further my studies in the sciences. I did not see special bilingual education French as one of the subjects in the series combinations in high school. There was mathematics, English, physics, chemistry, further mathematics and biol-

ogy and computer science. I decided to take that combination. There was no space for me to add the special bilingual education French.

6.3.2. Learners' Language Needs and Challenges as Reasons for Dropout

The majority of students interviewed faced a lot of challenges within the Special bilingual education French at the level of the GCE Ordinary Level Special Bilingual Education French. One of the difficulties that cut across the interviews had to do with broad nature of the SBEP curriculum. According to SBEP-S2 (a code for purposes of anonymity; a female student, in the Lower sixth Form in the S1 series, studying chemistry, physics, pure mathematics with mechanics, and pure mathematics with statistics), she dropped out of the SBEP because of the latter's broad curriculum amongst other related factors:

The special bilingual education French was very difficult in the secondary school because of the way it was taught. The curriculum was too broad for the form five level. We were being taught citizenship in French, sports in French and intensive French. In sports, the teacher was just giving us notes. All of that was too broad for us. Time allocated for the course was very little. There were no past questions for revision since we were of the first batch. The questions that came in the exam needed a lot of attention. We did not even finish answering all the questions. This affected our grades. Many failed the examination. The syllabus was very broad. Imagine citizenship, sports and French all combined. This was too heavy for us. This affected my grade in the examination. I had a "C" grade in the special bilingual education French.

Similarly, many learners faced difficulties in studying non-linguistic subjects like citizenship and sports and physical education through the medium of French. SBEP-S3 (a code for purposes of anonymity; a male student, in the upper sixth Form in the S1 series, studying chemistry, physics, pure mathematics with mechanics, and pure mathematics with statistics) recounts his ordeal in the SBEP:

I did not actually master French. The special bilingual education French was really difficult for me. In the GCE, it was really difficult to catch-up. The curriculum is heavy. It has sports, citizenship in French. To study all of these subjects in French was really difficult. The *français intensif* was different from the normal French. I found that it was difficult for me to catch-up. The French was intensive. The material taught was also difficult for me as I'm not very fluent in French. It took up the time I would have used to study my other subjects. The GCE was very difficult for me. I passed the special bilingual education French with a "C" grade. When I got to high school, I didn't want to repeat the same mistake. So, I left the program.

6.4. GCE SBEF Examiners' Perceptions of the SBEP Curriculum

GCE SBEF examiners were unanimous on the fact that the SBEP curriculum has a bias for literary subjects. According to the 2024 GCE A/L SBEF Subject Report,

many SBEP science-inclined students who get the second cycle “are abandoning it at this level because they do not see its relevance to their fields of study. The present content of the course is more favourable to literary students!” (2024 Subject Report for 0746 SBE French, page 154). An analysis of the syllabuses of the GCE A/LSBEF revealed that they are more literary in their orientation and favour arts students (Tables 3-6).

Table 3. Syllabus content of *Initiation à la littérature*.

Classes	Genres	Titres des œuvres	Auteurs
Lower Sixth Form	Prose	<i>Walaande. L'art de partager un mari</i>	Djaili Amadou Amal
	Poésie	<i>À hauteur de sang</i>	Jean Claude Awono
	Théâtre	<i>La Secrétaire particulière</i>	CLE
Upper Sixth Form	Prose	<i>Les chauves –Souris</i>	Bernard Nanga
	Poésie	<i>À hauteur de sang</i>	Jean Claude Awono
	Théâtre	<i>Ngum a Jemea. La foi inébranlable de R. Dualla Manga B.</i>	Mbangan Ewobwan

Source: Ministerial Circular on the 2024/2025 official booklists of the Special Bilingual Education Program.

Table 3 above presents the second cycle distribution of literary texts for the literature component of Intensive French, *Initiation à la littérature*. In addition to French language Grammar, Vocabulary, etc., SBE French high school students are expected to study these literary texts grouped into three literary genres: Prose, Poetry and Drama.

Table 4. Syllabus content of *Français Intensif*

CONTENTS	ATTAINMENT TARGETS
French sound system: pronunciation, intonation, rhythm; French grammar, syntax and lexis 1) Part of speech: Determiners: Articles & Adjectives; Nouns; Descriptive adjectives; Adverbs; Pronouns Verbs; Modes (conjugation and use) Prepositions; Conjunctions; Interjections 2) Syntax: Words; Sentence building Paragraphs 3) Writing: Essay writing conventions; punctuation marks; Text types; Building texts; coherence; General structure of an essay: introduction; Body; conclusion	Candidates shall be assessed on their ability to produce sounds appropriately; make clear distinction between declarative, interrogative, exclamative and imperative sentences; formulate sentences on topics selected; express ideas logically; do self-correction; use gestures and facial expressions to emphasize ideas; the ability to extract general and specific information about facts and events expressed in any given text; identify text types.

Source: Ordre No 92/15 /MINESEC/IGE/IP-BIL-OVS/IP-SH/CGCEB of 28th May 2015 to lay down the format and syllabus of the Special Bilingual Education French.

Table 4 above presents the syllabus content of the language component of module 1 of the SBEP: Intensive French—*Français Intensif*. The table shows that learn-

ers are expected to manipulate parts of speech as well as essay writing techniques in French.

Table 5. Syllabus content of *Éducation Physique et Sportive*.

TARGETED AREAS	TOPICS	SUB TOPICS	CONTENTS
Athletic activities: Awareness and body control adjustments	Physical effort; mobility; locomotion	Sprint	Conduct a transition of different phases of movement with the execution of attitudes, varying the number of supports and strides length over a given distance
		Speed endurance race	Spread efforts in endurance while effectively using the pace appropriate to one's abilities for race for a given distance
	Physical effort; manipulation	Shot put	Direct an object with the greatest possible precision to a target located at varying distances according to the form of execution adapted to individual capacity
	Physical effort; mobility	high jump	Jump correctly over a fixed object in a form of execution appropriate to individual capabilities.

Source: Order No. 92/15/MINESEC/IGE/IP-BIL-OVS/IP-SH/CGCEB of 28th May 2015 to lay down the format and syllabus of the Special Bilingual Education French.

Table 5 above presents the syllabus content of Sports and Physical Education—*Éducation Physique et Sportive*, one of the literary non-linguistic subjects that constitute the immersion module of the SBEP. Students are expected to engage in athletic activities in the French language involving physical efforts, mobility and locomotion as well as cooperation and opposition activities. Such an exposure to sporting concepts in French is expected to develop learners' skills in the latter.

Table 6. Syllabus content of *Éducation à la citoyenneté et à la morale*.

MAIN TOPIC	SUB-TOPICS	CONTENTS
Freedom of expression and political regimes	Notions on Freedom of expression and political regimes	Democracy; fundamental freedoms; political parties; trade unions; elections; political regimes: monarchy; presidential; parliamentary; dictatorial regimes
Cameroon and international relations	Cameroon before independence; Cameroon at independence and Africa; Cameroon and the rest of the world	Colonial Cameroon; Cameroon and the African union: Cameroon and its Sub-Region; Cameroon and the UN: Cameroon and La Francophonie: Cameroon and the Commonwealth: Cameroon and the Islamic World. Cameroon and the EU and ACP countries; Cameroon's bilateral cooperation with France, Great Britain;

Source: Order No. 92/15/MINESEC/IGE/IP-BIL-OVS/IP-SH/CGCEB of 28th May 2015 to lay down the format and syllabus of the Special Bilingual Education French.

Finally, **Table 6** presents the syllabus content of citizenship—*Éducation à la citoyenneté et à la morale*, one of the literary content subjects selected for the partial immersion module of the SBEP. The contents to which learners are exposed in the French language range from the concepts of democracy, political regimes, etc. to the colonial history of Cameroon and the relationship between Cameroon and international bodies.

6.5. GCE SBEF Examiners' Recommendation of FFSP Instruction to Curb Learner Dropout

In the face of massive drop out of students from the SBEP at the level of the second cycle, SBEP stakeholders have been brainstorming of ways to retain science-inclined students in the SBEP. The examination panel of the GCE A/L SBEF proposes the teaching of French for specific purposes as a way of making the SBEP more appealing and engaging to science-inclined students in the second cycle. According to GCE A/LSBEF-Ex 1 (a code for purposes of anonymity; a retired seasoned GCE A/L SBEF examiner, former Assistant Chief Examiner of *Français Intensif*), the teaching of FFSP in the second cycle will likely meet the scientific language needs of science-students in their pursuit of their scientific career dreams and inevitably keep them in the SBEP:

Let the school authorities should make the SBEP inclusive to science series. Those who run away generally are the science-inclined students. When the program gets to high school, it still maintains literature which is not relevant to science students. Authorities should make the program professional in the sense that science-inclined learners are initiated into the type of French that they will need after the GCE Advanced Level. When “S1” students graduate from high school, they often go to the school of medicine or engineering. The French language being taught should be such that t learners start learning some medical French so that when they go to the school of medicine, medical French has already been initiated in them. Students should be taught engineering French so that when they leave high school and go to the National Advanced School of Engineering, they should not meet engineering French for the first time. What we have in the SBEP now is literature. How is it relevant to an “S1” student?

In 2024, in the face of increasing dropout rates of students from the SBEP, the panel of the GCE A/L SBE, in their subject report, recommended the teaching of French for specific purposes and English for Specific purposes as didactical measures to retain science-inclined students within the SBEP:

We are also strongly suggesting that the Program be given a professional orientation in the second cycle: The Intensive French component should be transformed into French for Specific Purposes (FSP), or *Français sur Objectifs spécifiques* (FOS) in French. Similarly, learners in the francophone subsystem should do English for Specific Purposes (ESP); *Anglais sur Objectifs*

Spécifiques (AOS). This will address the specific needs of each Series and make it more appealing to the learners who are abandoning it at this level because they do not see its relevance to their fields of study. The present content of the course is more favourable to literary students! This orientation will necessarily lead to a syllabus review (2024 Subject Report for 0746 SBE FRENCH).

7. Discussion of Findings

7.1. Correlation between the SBEP Curriculum and Learner Dropout from the Program

Findings of this indicate that the exclusion of scientific subjects from the SBEP is one of the major setbacks in its implementation. The SBEP curriculum is not inclusive enough to meet the needs of both arts and science students. The syllabus contents are literary and favour only SBEP learners who intend to study social sciences in the second cycle. After obtaining the GCE Ordinary Level Bilingual education French, science students who would have loved to continue their high school studies in the SBEP are frustrated by the fact that the SBEP in the second cycle does not accommodate science subjects. Consequently, the students are obliged to abandon the SBEP in favour of scientific fields like chemistry, physics, mathematics, biology, etc. Even if science students were to enrol into the SBEP in the second cycle to learn Intensive French only, an analysis of the syllabus contents of *Français Intensif* (Table 2) revealed that they are tailored to meet the needs of general French. They are less appealing as they do not meet the language needs of science students in the second cycle. The Intensive French module focuses more on the acquisition of parts of speech than on the acquisition of language skills in real life situations. These findings corroborate existing literature on learner dropout from language programs. In a study carried out in a language school of a public University in Spain, Evans and Tragant (2020) [24] sought to determine the factors behind learner dropout in an English-as-a-foreign language program. Their findings revealed that students' perception of the mismatch between course curriculum and their language needs accounted, amongst other factors, for the high dropout rates from the language program.

7.2. Correlation between Learners' Language Needs and Challenges, SBEP Curriculum and Learner Dropout

Analysis of semi-structures interviews with SBEP learners revealed that the majority of them dropped out of the program owing to language needs and challenges with the curriculum. Many of them found the curriculum cognitively challenging when they have to study non-linguistic subjects like citizenship and sports and physical education in French. At the level of certificate assessment, they found the GCE O/L SBEF paper too difficult as they had to answer questions from three different school subjects in a single paper. This study indicates that SBEP face difficulties in understanding technical vocabulary in French linked to the non-lin-

guistic subjects. These findings are consistent with existing empirical literature on learners' language needs related to their fields of study. Kaewpet (2009) [25] set to determine the language needs of engineering students involved in an English for specific purposes instruction. His findings indicated that engineering students faced challenges manipulating technical vocabulary.

Long (2005) [26] and Umukoro *et al* (2020) [27] examine challenges faced by foreign language learners in their professional fields of study when they have to grapple with technical vocabulary. The authors recommend a structured language for-specific-purposes instruction capable of bridging the gap between general language needs and domain-specific language needs and making language learning and technical studies more engaging.

7.3. FFSP Instruction as a Measure to Retain SBEP Science-Inclined Learners

From the research findings, SBEP stakeholders are in favour of FFSP instruction as a means of curbing the increasing dropout rates from the SBEP. To them, the teaching of FFSP in the second cycle will meet the scientific language needs of science-inclined students. An FFSP instruction hinged on real-life domain-specific curriculum will make the language component of the SBEP more meaningful to learners. This will positively impact learners' perception of the SBEP. These findings are consistent with existing empirical literature on FFSP instruction. In the literature, FFSP instruction is reported to play a vital role in fostering learners' linguistic and intercultural competencies in terms of technical vocabulary acquisition related to learners' professional fields. A study conducted by Belcher (2009) [28] revealed that FFSP instruction enhances learners' professional proficiency and ability to handle professional tasks in the French language. The teaching of FFSP boosts learners' linguistic skills and increases their self confidence in using the target language in their professional fields.

In terms of intercultural competence, Byram (2019) [29] and Lazaraton (2001) [30] opine that FFSP instruction helps learners develop their perspectives of the culture and speakers of the target language, which perspectives enhance professional interactions. The results of a study carried out by Wozniak (2010) [31] to determine the effectiveness of FFSP instruction for medical students revealed that these students registered a marked improvement in the use of medical vocabulary in their professional interactions.

Empirical evidence in the literature also shows that learners generally have positive perceptions of the effect of FFSP instruction. They recognize the usefulness of FFSP courses in the accomplishment of their professional tasks. For example, a study by Basturkmen (2010) [32] revealed that FFSP learners were very fulfilled, committed and motivated in studying this course. Their positive attitudes towards the course stemmed from the fact that FFSP contents were contextualized and meaningful: directly linked to their career dreams.

Another study carried out by Gass (2012) [33] sought to determine the attitudes

of students of international relations towards an FFSP instruction. The findings of the study revealed that the students showed greater commitment and motivation in learning because the course contents matched their future careers and met their language needs in the diplomatic world. In their study, Agustín-Llach and Canga Alonso (2016) [34] sought to determine the attitudes of students and teachers of tourism management towards an FFSP course. The results of the study revealed teachers and students found the FFSP instruction more appealing, meaningful, and engaging because it addressed the language needs of learners in the tourism world.

Finally, a study by Uka Kalu & Mayen Umukoro (2024) [35] sought to evaluate the effectiveness of FFSP instruction in boosting the linguistic and intercultural competencies of students in the Department of Curriculum and Teaching at the University of Calabar. According to their findings, FFSP instruction was able to address students' language needs through the enhancement of learners' linguistic and intercultural skills in French. Not only did learners improve on their mastery of technical vocabulary but they became more aware of French cultural values and self-confident in the use of French in their fields of study. FFSP instruction positively shaped the perceptions and attitudes of both students and teachers towards FFSP.

8. Implication of Research Findings for the Implementation of the SBEP

The findings from this study have far-reaching implications for the implementation of the SBEP. The findings call for an immediate revision of the SBEP curriculum in the second cycle. Such a revision should consider the replacement of the general French-oriented *Français Intensif* with French for Specific Purposes to retain science students in the program. It should also consider modifying the current series combinations in the sciences in order to include the course *French for science students*.

8.1. Modification of the Current Second Cycle Series Combinations in the Sciences

The first implication of research findings is that the current second cycle series combinations in the sciences will have to be modified to accommodate the SBEP. In the Anglophone subsystem of education, science subjects are grouped into five series in the second cycle: S1, S2, S3, S4 and S5 (S stands for science). Each candidate is expected to register for not more than five subjects at the GCE Advanced Level. **S1** subjects include chemistry, physics, pure mathematics with mechanics, and pure mathematics with statistics. Additional subjects include food sciences & nutrition, information and communication technology or computer science, further mathematics and biology (**Table 7**).

S2 subjects include chemistry, physics, biology and additional mathematics. Additional subjects on offer include food sciences & nutrition, information and

communication technology or computer science, further mathematics and biology. S3 subjects include chemistry, biology, pure mathematics with mechanics and pure mathematics with statistics. Additional subjects on offer include food sciences & nutrition, information and communication technology or computer science, further mathematics and biology. S4 subjects include chemistry, biology and geology to which should be added food sciences & nutrition, information and communication technology or computer science, further mathematics and biology.

Table 7. Modification of science series in the second cycle.

Series	Subjects	SBEP	
S1	Chemistry, Physics, Pure Mathematics with Mechanics, Pure Mathematics with Statistics	Additional Subjects Food Sciences & Nutrition, Information and Communication Technology Or Computer Science, Further Mathematics, Biology	French for Sciences (FS)
	Chemistry, Physics, Biology, Additional Mathematics,	Food Sciences & Nutrition, Information and Communication Technology (ICT) or Computer Science, Further Mathematics, Biology	
S3	Chemistry, Biology, Pure Mathematics with Mechanics, Pure Mathematics with Statistics	Food Sciences & Nutrition, Information and Communication Technology (ICT) or Computer Science, Further Mathematics, Biology	French for Sciences (FS)
S4	Chemistry, Biology, Geology	Food Sciences & Nutrition Information and Communication Technology (ICT) or Computer Science, Pure Mathematics with Mechanics, Pure Mathematics with Statistics	French for Sciences (FS)
S5	Chemistry, Biology, Food sciences & Nutrition	Pure Mathematics with Mechanics, Pure Mathematics with Statistics	French for Sciences (FS)

Source: GCE Board, Series combinations.

Finally, S5 comprises the following subjects: chemistry, biology, food sciences & nutrition. To these subjects should be added food sciences & nutrition, information and communication technology or computer science, further mathematics and biology

As **Table 7** above indicates, the major modification of the second cycle series combinations in the sciences is the inclusion of the subject *French for Sciences* to replace *français intensif*. In all, GCE Sbef candidates will be expected to exceptionally register for six subjects including GCE Advanced Level Special Bilingual Education French for sciences (henceforth, GCE A/L SBEFS).

8.2. Modification of the Current *Français Intensif* Curriculum and Didactical Transposition

The second implication of our findings concerns the revision of the curriculum of the general French-oriented component, *Français intensif*. As stated earlier above, this course will have to be replaced by an FFSP course referred to as *French for Sciences*. In terms of curriculum design, the contents of French for Sciences will be subject-specific. For the SBEP French language teacher, the new curriculum design will entail analysing learners' scientific language needs in each science subject by identifying different discipline-specific discourse types that learners must master in order to succeed in their academic or professional studies. The French teacher will do this language needs analysis through the use of course books in French (Nsa & Heumou, 2002) [35] (**Appendix 1**). On the basis of scientific language needs duly analysed in coursebooks, the French language teacher will prepare their lessons and design subject-discourse-specific practice exercises for chemistry (Carras, Tolas, Kohler, & Szilagyi, 2007) [21] (**Appendix 2**), for physics (Mangiante & Parpette (2004) [23] (**Appendix 3**), for mathematics (Eurin Balmet & Henao de Legge, 1992) [36] (**Appendix 4**) and biology (Eurin Balmet & Henao de Legge, 1992) [36] (**Appendix 5**).

9. Conclusion

This paper sought to identify the reasons behind the increasing drop in student enrolment in the second cycle of the SBEP in the Anglophone subsystem of education and to determine stakeholders' perceptions of the measures that could be taken to curb learner dropout from the SBEP. Analysis of the data collected from documentary sources and semi-structured interviews revealed that the literary bias of the SBEP curricula is a deterrence factor: many science-inclined students abandon the SBEP in the second cycle because the program's curriculum here does not accommodate science subjects. Interviewed, SBEP learners reported that they found the SBEP curriculum too broad and irrelevant to their scientific career dreams and studies. The implications of this study were far-reaching. In a bid to retain science-inclined students in the SBEP in the second cycle, stakeholders recommended FFSP instruction. This recommendation necessitated a revision of the current SBEP curriculum and the different combinations of science subjects in the second cycle of the anglophone subsystem. On this double score, this paper has proposed a curriculum design for the SBEP in view of a practical teaching and learning of FFSP, in replacement of the general French-oriented Intensive French component—*Français Intensif*. The proposed curriculum design aligns with the current five GCE Advanced Level combinations of scientific fields (S1, S2, S3, S4 and S5) to which FFS (French for Sciences) has been added as a sixth subject for the SBEP candidates who will henceforth sit the GCE A/L SBEFFS (GCE Advanced Level Special Bilingual Education French for Sciences).

Conflicts of Interest

The author declares no conflicts of interest.

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Appendix 1. Analysis of Students' Scientific Language Needs from Coursebooks

Qu'est-ce que la chimie ?

Exemples de transformation physique : les changements d'état de l'eau

L'eau du robinet, du marigot ou du puits est à l'état liquide

- Versons de l'eau du robinet dans un sachet en plastique que nous mettons dans un congélateur en fonctionnement. Nous constatons que, progressivement, l'eau prend l'état solide et se transforme en glace: c'est la solidification de l'eau.
- Sortons la glace du congélateur et déposons-la à l'air libre. Nous constatons qu'elle fond et redevient liquide: c'est la fusion
- L'eau liquide peut se transformer en gaz (vapeur): c'est la vaporisation. Ce phénomène a lieu par exemple quand nous mettons un habit mouillé à sécher au soleil, ou lorsque nous faisons bouillir de l'eau.
- On parle de condensation ou liquéfaction lorsque la vapeur d'eau redevient liquide.

L'eau, comme toute autre matière, peut exister sous trois états: solide, liquide ou gazeux. Elle peut passer d'un état à un autre. Au cours de ces différents changements d'état, la nature de l'eau n'est pas modifiée.

généralisation :
Les transformations qui ne modifient pas la nature des substances sont des transformations physiques.

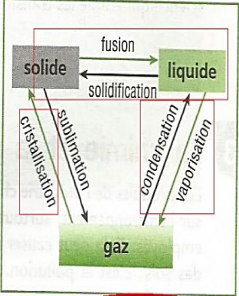


Fig. 3 Les changements d'état de l'eau.

Sources: Nsa, P. &, Heumou, K. (2002, p.40).

Nominalisation à base verbale indiquant une transformation en cours de réalisation.

Appendix 2. French for Sciences Course Contents (Chemistry) for All Series

Compétence	Besoins spécifiques en français	Exemples de tâches langagières	Outils linguistiques à utiliser
Compréhension écrite	Lire un protocole, une fiche de données de sécurité, une étiquette	Comprendre un mode opératoire, identifier des dangers	Impératif: <i>ajouter, chauffer, mélanger</i> Lexique: <i>solvant, acide</i>
Compréhension orale	Suivre une consigne de manipulation	Écouter une consigne orale, comprendre une démonstration	Verbes d'action: <i>verser, agiter, filtrer</i> Voix passive: <i>est chauffé</i> Connecteurs: <i>d'abord,</i>
Expression écrite	Rédiger un rapport de laboratoire	Écrire un protocole ou une conclusion	<i>ensuite, enfin</i> Structures: passé composé
Expression orale	Expliquer une expérience, une réaction	Présenter oralement une manipulation	Présentatif: <i>il s'agit de, c'est une solution aqueuse de...</i>

Source: Curriculum et exercices FOS établis à partir de Carras, Tolas, Kohler, & Szilagy (2007).

Exercice 1: Vocabulaire—Associer les termes à leur définition

Objectif: Acquisition du vocabulaire fondamental.

Associez chaque mot à sa définition:

Terme	Définitions
Solution	1) Substance qui accélère une réaction chimique
Réactif	2) Substance introduite pour provoquer une réaction
Catalyseur	3) Résultat du mélange homogène entre un solvant et un soluté
Précipité	4) Solide formé lors d'une réaction chimique entre deux liquides

Exercice 2.

Complétez le texte ci-dessous en mettant les verbes entre parenthèse aux formes qui conviennent pour décrire l'expérience de changements d'état de l'eau. Utilisez le pronom personnel *nous* et le présent de l'indicatif:

L'eau du robinet est à l'état liquide:

1. ____ (**verser**) l'eau du robinet dans un sac en plastique que nous ____ (mettre) dans un congélateur. Nous ____ (**constater**) que progressivement, l'eau ____ (prendre) l'état solide. Elle ____ (se transformer) en glace:

C'est la ____ (**solidifier**)

2. ____ (**sortir**) la glace du congélateur. ____ (**déposer**) la glace à l'air libre.

Nous ____ (**constater**) qu'elle ____ (**fondre**) et elle ____ (**redevenir**) liquide:

C'est la ____ (fuser).

3. L'eau liquide peut ____ (se transformer) en gaz (**vapeur**):

C'est la ____ (**vaporiser**).

4. On parle de ____ (**condenser**) et de ____ (**liquéfier**) lorsque la vapeur d'eau ____ (**redevenir**) liquide.

Exercice 3: Expression orale—Décrire une expérience

Objectif: Travailler la description d'un processus chimique (*présent, passif, connecteurs logiques*).

Consigne: Par deux, l'un décrit une expérience chimique réalisée (ou vue en TP), l'autre pose des questions de clarification.

Appendix 3. French for Sciences Course Contents (Physique) for All Series

Compétence	Besoins spécifiques en français	Exemples de tâches langagières	Outils linguistiques à utiliser
Compréhension écrite	Lire des lois physiques, des graphiques, des formules	Lire un texte explicatif sur la loi d'Ohm ou la gravité	Lexique: force, masse, tension, champ électrique Structures causales
Compréhension orale	Comprendre une démonstration orale	Écouter un enseignant expliquer une expérience	Connecteurs: donc, ainsi, car Présent de l'indicatif

Continued

Expression écrite	Expliquer un phénomène physique	Rédiger une explication sur la vitesse, la pression	Phrases causales: parce que, en raison de Passif
Expression orale	Présenter un schéma ou une loi	Expliquer un phénomène simple à un camarade	Organisation du discours: Premièrement, ensuite, enfin

Sources: Curriculum et exercices FOS établis à partir de Mangiante & Parpette (2004).

Exercice 1: Compléter un texte à trous (champ lexical)

Pour mesurer l'_____ d'un courant, on utilise un _____ placé en série.

L'unité est l'_____. Pour la _____, on utilise un _____ placé en dérivation.

Intensité-ampèremètre-tension-volt-voltmètre

Objectif: Maîtrise du vocabulaire et des outils de mesure en physique.

Appendix 4. French for Sciences Course Contents (Mathematics) for All Series

Compétence	Besoins spécifiques	Exemples de tâches langagières	Outils linguistiques à utiliser
Compréhension écrite	Lire une démonstration, un énoncé de problème	Repérer les hypothèses, les conclusions	Structures logiques: "si... alors..." , "donc" , "or"
Compréhension orale	Suivre un raisonnement oral, une correction d'exercice	Comprendre la démarche pour résoudre un problème	Articulation logique, temps du présent Lexique: hypothèse, conséquence,
Expression écrite	Rédiger un raisonnement structuré	Écrire les étapes d'une démonstration	implication, symboles mathématiques en mots
Expression orale	Expliquer un problème, présenter une démarche	Expliquer la résolution d'un exercice au tableau	Langue explicative, phrases complexes, mots de liaison

Sources: Curriculum et exercices FOS établis à partir de Eurin Balmes & Henao de Legge (1992).

Raisonnement hypothético-déductif**Exercice 1: Compétences attendues:**

Étant donné une situation d'apprentissage de la démonstration en mathématiques, les apprenants seront capables d'identifier les différentes étapes de la démonstration et les marqueurs linguistiques qui les organisent et d'utiliser correctement ces marqueurs linguistiques dans la rédaction de la démonstration.

Consignes: Repérez et soulignez les différents marqueurs linguistiques qui articulent les différentes étapes de cette démonstration.

ÉNONCÉ

Soit ABC un triangle équilatéral de 3 cm de côté. Soit M le milieu de $[BC]$ et O

le milieu de $[AM]$. On appelle alors respectivement D et E les symétriques de B et C par rapport à O .

Consigne: Montrer que E , A et D sont alignés

RÉDACTION DE LA DÉMONSTRATION

Montrer que E , A et D sont alignés.

Par hypothèses, \bullet M est le milieu de $[BC]$ donc C , M , et B sont alignés. E est le symétrique de C par rapport à O . O est le milieu de $[AM]$ donc A est le symétrique de M par rapport à O . D est le symétrique de B par rapport à O .

Exercice 2: Présenter oralement une résolution d'exercice

Consigne: En deux, choisissez un exercice de calcul intégral et présentez oralement chaque étape de la résolution.

Objectif: Structurer un raisonnement mathématique à l'oral.

Appendix 5. French for Sciences Course Contents (Biology) for All Series

Compétence	Besoins spécifiques en français	Exemples de tâches langagières	Outils linguistiques à utiliser (exemples)
Lire et comprendre un texte scientifique	Comprendre des articles de biologie, des fiches de TP, des rapports de recherche, etc.	Lire un article sur la photosynthèse ou la génétique et répondre à des questions. Résumer un texte.	- Vocabulaire spécialisé: cellule, tissu, organisme, enzyme, ADN, molécule, mutation, espèce, etc. - Types de texte: définition, description, explication. - Connecteurs logiques: "en effet" , "par conséquent" , "de plus" .
Décrire un processus biologique	Savoir expliquer les étapes d'un phénomène naturel (ex: digestion, respiration cellulaire).	Écrire ou expliquer oralement les étapes de la mitose. Présenter un cycle biologique (cycle de Krebs, cycle menstruel...).	- Verbes au présent ou à l'imparfait: "se déroule", "commence", "se divise". - Voix passive: "la molécule est absorbée", "l'enzyme est activée". - Connecteurs chronologiques: "d'abord", "ensuite", "enfin". - Formules scientifiques:
Rédiger un compte rendu ou un rapport de TP	Expliquer une expérience, décrire le matériel, la méthode, les résultats et conclure.	Rédiger le compte rendu d'une dissection. Présenter les résultats d'une expérience sur la germination.	"hypothèse", "résultats attendus", "interprétation des résultats". - Structures types: "Le but de l'expérience est de...", "Nous avons observé que...".
S'exprimer à l'oral dans un contexte scientifique	Présenter un exposé sur un sujet biologique, participer à un débat scientifique.	Exposer oralement les conséquences de la déforestation sur la biodiversité.	- Expressions pour structurer un exposé: "Je vais vous parler de...", "Tout d'abord", "Ensuite", "En conclusion". - Formes de l'argumentation: "Selon moi", "Il est important de..."

Sources: Curriculum et exercices FOS établis à partir de Eurin Balmes & Henao de Legge (1992).

Exercice 1: Vocabulaire—Associer les mots au schéma

Consigne: Observez un schéma d'une cellule animale.

Associez les mots suivants aux parties du schéma:

Mots: noyau-membrane plasmique-cytoplasme-mitochondrie-ribosome

Objectif: Mémoriser et situer les éléments du vocabulaire biologique.

Exercice 2: Expression orale—Présenter un processus

Consigne: Présentez à l'oral une fonction du corps humain ou un cycle biologique (ex.: digestion, photosynthèse, cycle menstruel).

Langue à mobiliser:

- Verbes au présent de l'indicatif: "commence", "se produit", "absorbe"
- Connecteurs logiques: d'abord, ensuite, puis, enfin
- Lexique: système digestif, enzyme, nutriments, etc.

Exercice 3: Résumé de texte

Consigne: Résumez ce texte sur l'ADN en 5 lignes maximum.

Reformulez avec vos mots.

Objectif: Savoir synthétiser un contenu scientifique avec un lexique adapté.