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**LEARNING STRATEGIES AND STUDENTS
BILINGUAL ACHIEVEMENT IN THE FACULTY OF
EDUCATION OF THE UNIVERSITY OF
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DEDICATION

This piece of work is dedicated to my beloved parents, Mr. Anyamoh James and the precious wife, Mrs. Anyamoh Ruth who supported me until I finished this master II thesis.

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LIST OF ABBREVIATIONS

UYI:	The University of Yaounde 1
CEV :	Curricula et Evaluation
EFE :	Enseignement Fondamentaux en Education
ENS:	Ecole Normale Supérieure
CRTV:	The Cameroon Radio and Television
ASTI:	Advanced School of Translators and Interpreters
FSLC:	First School Leaving Certificate
CEP:	Certificat d'Etudes Primaires
SCT:	Social Cognitive Theory
L1:	First Language
L2:	Second Language
ZPD:	Zone of Proximal Development
Ho:	Null Hypotheses
Ha:	Affirmative Hypotheses
MSLQ:	Motivated Strategies for Learning Questionnaire
MINESUP:	Cameroon Ministry of Higher Education
SCT:	Social Cognitive Theory
SPSS:	Statistical Package for Social Sciences
MSLQ:	Motivated Strategies for Learning Questionnaire
CGPA:	Cumulative Grade Point Average
F	Frequency
%	Percentage

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ABSTRACT

This study entitled, “learning strategies and students’ bilingual achievement” seeks to study the strategies used by students in the bilingual education system to achieve learning objectives. This study was inspired from the study of Atindogbe and Dissake (2019) who revealed that students in the universities where official bilingualism is used, face two types of learning difficulties: language barrier or linguistic insecurity, and subject content because of the language of instruction. We equally observed that students are having difficulties in understanding lessons not because of the contents but because of language barrier. We formulated the problem of poor bilingual achievement by students. Thus we asked: is there a relationship between learning strategies and students bilingual achievement? To answer the question, we formulated the hypothesis that there is a relationship between learning strategies and students’ bilingual achievement. The objective of this study is to investigate the relationship between learning strategies and students’ bilingual achievement. The research was carried out in the faculty of education of University of Yaoundé I and the sample population was Master II students of Curricula et Evaluation (CEV) and Enseignements Fondamentaux en Education (EFE). To achieve the objective of this study, the quantitative research survey design was used whereby given a population of 249, A minimum sample of 152 students were determined by consulting Krejcie and Morgan (1970). The five points Likert scale questionnaire was used for data collection and this data was analyzed using descriptive statistics. The hypotheses were tested with a combination of Pearson correlation and regression tools. The results obtained from the verification of the hypotheses were as follows: hypothesis 1 there is a relationship between self-motivation and students’ bilingual achievement, hypothesis 2: there is no relationship between student interaction and students’ bilingual achievement, hypothesis 3: there is a relationship between personal effort and students’ bilingual achievement. Consequently, some recommendations were made.

Key words: learning *strategies*, *bilingual achievement*.

RESUME

Notre étude intitulée, " stratégies d'apprentissage et réussite bilingue des étudiants " vise à examiner la relation entre les stratégies d'apprentissage et le niveau de bilinguisme des étudiants. Cette étude a été inspirée des travaux d'Atindogbe et Dissake (2019) qui ont révélé que les étudiants dans les universités où le bilinguisme officiel est utilisé, font face à deux types de difficultés d'apprentissage : la barrière de la langue ou l'insécurité linguistique et le contenu de la matière. Nous avons observé que les étudiants ont des difficultés à comprendre les cours non pas à cause du contenu mais à cause de la barrière linguistique. Nous avons formulé le problème du faible niveau de bilinguisme des étudiants. Ce problème a suscité une interrogation : existe-t-il une relation entre les stratégies d'apprentissage et le niveau de bilinguisme des étudiants ? Pour répondre à cette question, nous avons formulé l'hypothèse qu'il existe une relation entre les stratégies d'apprentissage et le niveau de bilinguisme des étudiants. La recherche a été menée à la Faculté des Sciences de l'Education de l'Université de Yaoundé I où 152 étudiants de Master II en Curricula et Evaluation (CEV) et des Enseignements Fondamentaux en Education (EFE) ont été sélectionnés pour participer à cette étude. La collecte de données s'est fait à partir d'un questionnaire. Nous avons utilisé comme instrument d'analyse des données le Statistical Package for Social Sciences (SPSS). Les hypothèses ont été testées avec une combinaison d'outils de corrélation et de régression de Pearson. Les résultats obtenus à partir de la vérification des hypothèses sont les suivants : hypothèse 1 : il existe une relation entre l'auto-motivation et la réussite bilingue des étudiants ; hypothèse 2 : il n'existe pas de relation entre l'interaction des étudiants et la réussite bilingue des étudiants ; hypothèse 3 : il existe une relation entre l'effort personnel et la réussite bilingue des étudiants.

Mots clés : *stratégies d'apprentissage, réussite bilingue*

INTRODUCTION

Education is very important for the growth and development of any country, in modern education systems the goal of every student is to succeed. Cameroon being a bilingual country, teaching is expected to be done in the two official languages of the State and in a comprehensive, fair and balanced manner that will make information available to the two linguistic strata in the nation. How best can this be achieved if not through bilingual education Bilingual education became essential in order for students to cope with the needs and challenges of the changing world. The Bilingual Education is an integration of students' native language along a continuum language as the medium of instruction. Bilingualism simply refers to the mastery of two languages to produce learners who can fluently speak, read, write and communicate in the conventional language of instruction. The ultimate goal of any bilingual education program is for a student to learn a second language while developing his native tongue. Defined broadly, it can mean any use of two languages in school by teachers or students or both for a variety of social and academic purposes. Bilingual education will have an important impact on the future well-being of student. Therefore, learning strategy is needed to make learning easier, faster, more enjoyable and more effective. Learning strategies help students to become more efficient in the teaching-learning process. In a bilingual education system students are obliged to use different kinds of learning strategies gaining academic success. But the question here is; what is learning strategy? According to Pam (2016) psychology dictionary, it is a strategy used primarily during the process of learning such as forming a mental image of a process. Moreover, according to Tay (2013) Learning strategies are the total effort that the students need to process, understand and adopt the information introduced in teaching-learning processes or in their individual preparation. One of the objectives of learning strategies is to overcome the obstacle face with the acquisition of bilingual education and to increased academic performance. It is expected that students will attend proficiency in bilingual education if they use effective learning strategies. Learning strategies and students' bilingual achievement is worth examining as students have to coordinate two linguistic systems in the teaching-learning process. Therefore, students need effective learning strategies to improve bilingual achievement. It is in this regards that this study is entitled "learning strategies and students' bilingual achievement" Chapter one of this study includes the research problem, research questions, research hypothesis and research objectives. It also includes significance of the study and definition of key concepts. Chapter two deals with the review of literature related to the problem under study and theoretical

framework of the study. Chapter three is concerned with the methodology used in the study, it presents the population and sample of the study, sampling technique, instrument, data collection and analysis and a recapitulative table including variables and indicators. Chapter four is the representation of results and data analysis done using the Statistical Package for Social Sciences (SPSS). Chapter five is the interpretation of results and discussion of findings.

CHAPTER 1: THE PROBLEM

In today's knowledge society, students are obliged to use different kinds of learning strategies to reach the same goal: gaining academic success, because learning strategies are activities performed throughout individual's life. Over the past three decades, learning strategies has been widely investigated: learning strategies which are most beneficial and strategies which are detrimental to academic success (Credé & Phillips, 2011; Richardson, Abraham & Bond, 2012) meta-analyses. It is worth examining students as they have to coordinate two linguistic systems in the teaching and learning process. In this chapter, the researcher will present the research problem, research questions, research hypotheses, and the objective of the study, significance and finally the definition of key concepts.

1.1. BACKGROUND OF THE STUDY

Education in the university level has various concentrations where every student is free to learn in different styles, consequently students who use French and English as medium of instruction to study are increasingly turning to the concept of learning strategies as a means of exploring individual differences. Regardless of the type of setting, learners use various strategies to accomplish their learning needs. Students use learning strategies to help them understand information and solve problems. Learning strategies are multidimensional and complex constructs, for which reason different authors have differing definitions. Weinstein and Mayer (1986) define strategies as conducts and thoughts students apply during learning with the purpose of influencing their coding process. Brunner (2001) states that students learn by discovering in an active and constructive manner.

Learning strategies are those techniques or specialized skills that the learner has developed to use in both formal and informal learning situations (McKeachie, 1980). "Recent research on teaching and learning has focused on the active role of the learner in student achievement" (McKeachie, 1980, p. 23). Techniques, tactics, and methods which enhance effective learning have been called learning strategies. The strategies are external behaviors developed by an individual through experience with learning which the learner "elects to use in order to accomplish a learning task" (Fellenz & Conti, 1989, p. 7). The learning strategies a student uses can have an effect upon their academic achievement (Mayer, 1987). Other authors agree that individuals have their own way of learning, which is not the same way for everyone (Demirbas & Demirkan, 2007; Hernández-Pina, García-Sanz & Maquilon, 2004;

Lashley & Barron, 2006). When we connect these concepts, we can interpret that learning strategies are the processes or mechanisms the individual uses to gain knowledge.

Psychologist and Researchers in the fields of education have noted the importance of the concept of learning strategies. McKeachie (1980) and Weinstein, Zimmerman and Palmer (1988) have advocated an approach to learning which incorporates teaching a variety of skills thought to be linked to academic performance. McKeachie (1980) has investigated links between types of attention or concentration; memory aids such as grouping, automatization, and visualizing; the use of elaboration as a memory aid; and the vital role of motivation in learning. Weinstein et al. (1988) and Mayer (1987) have researched how students process information and other behaviors learners engage in during learning. Other researchers have focused on the role of learning strategies used in real-life learning situations (Fellenz & Conti, 1989).

Learning strategies can be divided into five component areas (Conti & Fellenz, 1991; Fellenz & Conti, 1989). These are Metacognition, Metamotivation, Memory, Critical Thinking, and Management of Resources. Metacognition can be thought of as the executive control of learning. It is composed of planning how to go about learning, monitoring how well the plan is being carried out, and adjusting the plan depending on progress toward the learning goal. Metamotivation deals with how individuals build and maintain internal motivation to complete learning tasks. Memory as it relates to learning strategies involves (a) how a learner organizes new information into knowledge already known, (b) the use of external memory aids such as item lists, and (c) self-knowledge about personal memory and knowledge of strategies that are useful in remembering (Fellenz, 1993, PP- 5-8). Critical thinking involves how one discriminates and reflects upon learning material. Management of learning resources relates to how learners identify and critically use appropriate sources of information. All of these aspects of learning strategies are thought to play an integral part in how much and how well students achieve in learning situations (McKeachie, 1980).

Cameroon is a Central African nation situated on the Gulf of Guinea, bordered to the north by Nigeria, to the east by Chad and the Central African Republic, and to the south by Equatorial Guinea, Gabon and the Democratic Republic of the Congo (Brazzaville). It has seen German, French and English colonizers since the late nineteenth century. After world war one (1914-1918), the country was taken away from the Germans and was partitioned between French (French Cameroons) and the British (British Cameroons) as their colonial

masters. In 1961, the two Cameroons united into the federal republic of Cameroon, although part of former British Cameroon opted to join Nigeria, and the new country officially became bilingual in the two received languages of French and English. In 1972 the federal republic became the united republic.

Therefore, bilingualism in Cameroon is the constitutional recognition of French and English as the two official languages of the country equal in status and guaranteed promotion by the state. This is what is termed “official bilingualism” which differs from the ordinary or basic definition of bilingualism, fluency in or use of two languages. Official bilingualism was given its most unequivocal definition by Cameroon’s first president Ahmadou Ahidjo who underscored: “By bilingualism we mean the practical usage of our two official languages, English and French, throughout the national territory.”

Bilingualism in Cameroon has its force from the various declarations and texts coming from state institutions. Bilingualism is enshrined in the Cameroon Constitution since 1961, when English and French were recognized as official languages. The law N^o 96-08 of 18 January 1996 Constitution is abundantly clear in this regard, the national territory. When Francophone and Anglophone Cameroon were united in October 1961, the new state adopted French and English as its two official languages, and the government embarked on the promotion of bilingualism throughout the country (Kouega, 2008).

Indeed, Part One, section one (3) of the 18th January 1996 Constitution makes mention of bilingualism in Cameroon by these expression: “the official languages of the Republic of Cameroon shall be English and French, both languages having the same status. The state shall guarantee the promotion of bilingualism throughout the country. It shall endeavor to protect and promote national languages” Cameroon, R. O. (1996).

Therefore, both official languages are to be promoted in all the various sectors of the state. The Law N^o 2001/N005 of 16th April 2001 which defines the general orientations of the higher educational system in Cameroon highlights in its section five (5) the value that the state attributes to bilingualism as a factor of national unity and integration.

Since the adoption of bilingualism in Cameroon, several policies have been elaborated to promote these languages. Several decisions were adopted in the form of ordinances, decrees, and circulars, service notes by the State to ensure the spread of official bilingualism throughout the country, the most frequently cited and usually publicized decisions are listed below:

- Linguistic centers were created to enable citizens to learn English and French, an activity which was originally restricted to the British Council, the American Cultural Center and the French Cultural Centre;
- Translation services were offered in all State institutions and a school for the training of translators and interpreters (Advanced School of Translators and Interpreters—ASTI) was opened in Buea;
- Bilingual Secondary Schools were created in various localities in the country;
- The bilingual degree programme was set up in the University of Yaoundé and the Higher Teacher Training College (Ecole Normale Supérieure—ENS); today this programme is available in all State universities of the country;
- English became a subject in all French-medium secondary schools and French the same in all English-medium schools;
- The second official language became a subject in all public examinations, with francophone candidates writing an English language paper and Anglophone candidates writing a French language paper
- The Official Gazette, which records the country's daily activities, was printed in the two languages and so was the official daily newspaper i.e. Cameroon Tribune published;
- The National Radio and TV network (CRTV) alternated programmes in French and English at regular intervals.
- Since the year 1996, another battery of measures has been added to these older ones. These include the following:
 - An order stipulating that every primary school teacher would henceforth teach every subject on the school syllabus including the second official language subject was issued (Order No 21/E/59 of May 15, 1996 organizing the Grade One teacher certificate examination);
 - A primary school syllabus outlining how each subject including the second official language subject would be taught was designed by the Ministry of Education (MINEDUC [1], Kouega [2]);
 - An order introducing the second official language subject in both the written and oral parts of the First School Leaving Certificate (FSLC) examinations and its French equivalent, the Certificat d'Etudes Primaires (CEP) examinations (Order No 66/C/13 of February 16, 2001);

- A National Day of Bilingualism in public and private schools in Cameroon was instituted (Decision no 1141/B1/1464/MINEDUC/IGE/IGP/BIL of October 28, 2002); on this day, Anglophone pupils are expected to communicate in French and francophone pupils in English;
- A circular letter instructing primary and nursery education state officials to see that bilingualism is effective in all nursery and primary schools (circular letter No 033/B1/1464/MINEDUC/IE/IGPBIL of October 14, 2002);
- A circular letter instructing secondary education state officials to see that the National Bilingualism Day is observed in all schools and that, in addition, Language Clubs (LC), to be called “Club Français” for Anglophone pupils and “English Club” for Francophone pupils, be set up in all schools, that the National Anthem be sung in English and French on alternate days and that a prize be awarded to the best bilingual pupils in each class (Circular letter No B1/1464/MINEDUC/IGE/IGE/GP/BIL of December 2, 2002);
- A circular letter instructing teacher training college principals to provide adequate training so that student-teachers be sufficiently equipped to teach the second official language (Circular letter No 009/B1/1464/MINEDUC/IGE/IGP/BIL of April 9, 2003); (see Abang [3] for an evaluation);
- A decision creating a bilingualism watchdog committee in the Ministry of Education, which is responsible for the observation, verification and supervision of the practice of bilingualism in central and external services of the Ministry of Education (Decision No 1230/B1/1464/MINEDUC/CAB of June 12, 2003) …

After these decisions and measures are implemented fully, it was envisaged that every Cameroonian citizen would be bilingual in French and English and every pupil who leaves secondary education would have learned enough French and English to be capable of following courses taught in either official language at all levels. The impetus for bilingualism from political authorities began from independence with Cameroon’s first president Ahmadou Ahidjo. While launching the first bilingual secondary school created by his government in Buea in 1962, Ahidjo exhorted his compatriots to be practical about bilingualism. Constable noted that policy statements on bilingualism had been a recurrent theme in speeches from state officials since independence. In recent years, president Paul Biya has been consistent not just in stressing the importance of bilingualism but giving some of his speeches in English.

This eloquent demonstration of political will on bilingualism goes to strengthen its prospect of survival.

The policy of “regional balance” instituted by Ahidjo and continued under Biya also consolidates bilingualism. Ahidjo introduced regional balance as a policy of equity which sought to promote “balanced development” and “redress regional inequalities by providing education, infrastructures and the public amenities necessary for bridging the country and the town.” Under this policy, special attention was focused on the particular needs of different communities. For example, it created state universities in the two Anglophone regions (Southwest and Northwest).

Other educational policies have been pursued by the government to enhance bilingualism. The Ahidjo regime created bilingual high schools, e.g., the Bilingual Grammar School Buea (established in 1962) and the Bilingual High School Yaoundé (established in 1977). Attempts were made during the Ahidjo regime to also introduce bilingualism in primary schools. This process continued under Paul Biya with an educational policy that made English and French compulsory for students at the primary and secondary levels of education. Rather than limiting the two educational sub-systems exclusively to their respective regions, the government permitted them to run in all the regions of the country.

This enabled the creation of English schools in the French part of the country and vice-versa thereby giving all Cameroonians the opportunity to acquire a bilingual education. Another advantage drawn from this policy is that of language immersion. Note that since the 1970s there have been many francophone students attending English primary schools. Soule extends this phenomenon, arguing that the immersion is from both sides (French to English and vice-versa) and continues up to secondary school. Immersion is a strong factor that consolidates bilingualism and could ensure its preservation in Cameroon.

The government also passed sweeping reforms in March 2017 to address the concerns raised by Common Law lawyers about relegation of the Common Law. President Biya signed a decree creating a Common Law Bench at the Supreme Court and a Common Law Division in the Advanced School of Administration and Magistracy. This came after the January 2017 handing over of an official English version of business laws to the President of the Cameroon Bar Council by Minister of Justice and Keeper of the Seals Laurent Eso. The Common Law Bench was officially installed on 20th August 2017 with an Anglophone Chief Justice Epuli

Mathias Aloh also installed as President of the Judicial Council of the Supreme Court. The aforementioned measures are crucial to the resolution of the fundamental grievances of the Common Law lawyers and the creation of a legal environment for bilingualism to continue.

The Cameroonian government has also taken major administrative steps to promote bilingualism and ensure its survival. It established the Bilingual Training Program, which is placed under the supervision of the General Secretariat of the Presidency of the Republic. This department coordinates bilingualism training centers that operate in all ten regions and provide bilingual training to civil servants and citizens. The Office of the President, Prime Minister's Service, National Assembly, Senate, and all government ministries run translation units to ensure that official texts are translated in both languages.

January 2017 saw the creation of a National Commission for the Promotion of Bilingualism and Multiculturalism. While commissioning members to their function on 27th April 2017, Prime Minister Philemon Yang pointed out that the role of the Commission constituted inter alia: submitting reports and recommendations on issues relating to the protection and promotion of bilingualism and multiculturalism to the President of the Republic and the Government; - monitoring the implementation of constitutional provisions establishing English and French as two official languages of equal status, and especially ensuring their use in all government services, semi-public bodies as well as any State-subsidized body; - conducting any study or survey and proposing measures likely to strengthen Cameroon's bilingual and multicultural character; - preparing and submitting to the President of the Republic draft instruments on bilingualism, multiculturalism and togetherness.

The Commission was created to help allay worries about the lack of supervision of the implementation of bilingualism. National social integration, the cultural blending of Cameroonians and the emergence of cosmopolitan communities in most of Cameroon's major cities, also enhances bilingualism. Intermarriages between Anglophone and Francophone, and their resettlement or integration outside their areas of origin has led to the birth of ethnically diverse communities in urban centers. This mitigates the pressure of linguistic nationalism and stabilizes social relationships.

The institution of the "National Bilingualism Day" and "National Bilingualism Week" which takes place every year on the first Friday of February and organized by the Ministries

of Basic Education and Secondary Education constitutes an important means of promoting bilingualism in primary and secondary schools. The Minister of Secondary Education Jean Ernest Massena Ngalle Bibehe said during the National Bilingualism Week, bilingualism in Cameroon is “the cement of national unity and national integration” (Mosima, 2016).

As earlier observed, the policy of official language bilingualism constitutes the main core of Cameroon's language policy. Article 1, paragraph 3 of the Constitution of 18th January 1996 is abundantly clear in this regard: The official languages of the Republic of Cameroon shall be English and French, both languages having the same status. The State shall guarantee the promotion of bilingualism throughout the country. It shall endeavor to protect and promote national languages.

Cameroon is perfectly bilingual and both languages have the same status but in practice, French emerges as a dominant language in all areas of public life (Arjun & Verberne, 2015). People from North West and South West regions, because of their historical attachment to Britain, can speak English fluently while those originating from the Center, Littoral, South, West, East, Adamawa, North and Far-North regions due to their historical attachment to France can speak French fluently. This is why Cameroonians often go by this expression; “*C'est le Cameroun qui est bilingue, pas les Camerounais*” which means “Cameroon is a bilingual Country but the Cameroonians are not”. According to (Abongdia, 2014), the problem of unsuccessful bilingualism in Cameroon may lie in “the very monolingual orientation of the policy, which sees these languages as distinct, separate entities and makes no room for blended varieties like CPE, Camfrancanglais or even indigenous languages”. For (Soule, 2013) “The constitution makes mention of the promotion of bilingualism, but it is silent on how it should be practiced and implemented.

Cameroon has adopted two systems: The Anglophone sub-system education based on the Anglo- Saxon model and the francophone sub-system of education based on the French model. The two sub-systems of education are operational from primary to higher education level. In Yaoundé, English is taught from the nursery and primary level till the tertiary level (university). English is a considerable and respected subject in this region. These can be proven by the high credit points attributed to it (credit 3, or credit 5 in some classes) more than the credit of other subjects in secondary schools and universities. English language is not only taught as a subject, but it is also compulsory for every student to take part in English

exams. In the English- speaking regions, French language teaching also starts from nursery and primary school and continues till the higher tertiary level.

In order to meet with the challenges of bilingual education in Cameroonian institutions of higher learning, the teaching of French to Anglophone students and English to Francophone students was instituted in 1962 following the creation of the Federal University. This compulsory course known as ‘Bilingual Training’ had as primary objectives to help improve both the oral and written skills of students in both English and French in order to facilitate their acquisition of knowledge in the university, and eventually help in their linguistic integration in public life. Bilingual Training is not limited to faculties of the universities, but extends to professional institutions of higher learning.

The University of Yaoundé I (UYI) is located in Yaoundé, Central region of Cameroon. It is accredited by *Ministère de l’Enseignement Supérieur*, Cameroon. The University of Yaoundé I (UYI), is the mother of Cameroonian universities. In October 1961, following the reunification of the country, higher education was born in Cameroon under the denomination of Institute of University Studies. Thereafter, 26th July 1962 marked the creation of the Federal University of Cameroon which became the University of Yaoundé in 1973. The University of Yaoundé I is one of the state universities created by decree N° 93/026 of 19 January 1993 as a result of university reforms. The University, as a Higher Educational Institution (Federal University of Cameroon) having as mission to contribute to the social development through the pursuit of education, learning and research came into existence in Cameroon on the 26th of July 1962 (MINESUP, 2014).

1.2 OBSERVATION AND PROBLEM STATEMENT

The study of Atindogbe and Dissake (2019) explained that students in the universities where official bilingualism is used, face two types of learning difficulties: language barrier or linguistic insecurity, and subject contents. They equally revealed that during their interview with teachers, the teachers received from students’ complaints of having difficulties in understanding lessons not because of the contents, but because of the language of instruction.

According to the 2021/2022 statistics of the level 3 students of bilingual training in the university of Yaoundé 1, the faculty of arts, humanities and social sciences (FALSH) of the department of English and the department of modern French letters. In the department of English, (English students studying French) in the first semester examination, the effective

was 277, capitalization: 173 (62, 45%) and capitalization none transferable was 81(29, 24%). While in the third semester examination, the effective was 51, capitalization: 28(54, 90%) and capitalization none transferable was: 22(43, 14%). On the contrary, in the department of French (French students studying in English) in the first semester examination, the effective was 1142, capitalization: 703(61, 56%) and capitalization none transferable was 305 (26, 36%). While in the third semester examination, the effective was 49, capitalization: 16(32, 65) and capitalization none transferable was 27(55, 10%).

Looking at the above difficulties and statistics, bilingualism as medium of instruction in the University of Yaoundé 1 is worth examining and this is why the researcher seeks to investigate, if the same difficulty is encountered by students of the faculty of Education of the University of Yaoundé I. One of the basic objectives of the higher education realm stipulated in section 6 of chapter I in the 1st part on 16th April 2001 is that the higher educational institution has as fundamental mission: to promote bilingualism (Cameroon, R. o. 2001). The law for the promotion of bilingualism in Cameroon stipulates: the usage and the practice of two official languages in teaching and learning. From this law, it entails the use of the two official languages in education, especially at the university level.

In the University of Yaoundé, I, English and French are used as languages of instruction in lecture halls wherein Anglophone and Francophone sit side by side in the same classroom. Thus the professor employs the official language he masters better for his lecture, irrespective of the linguistic background of the students. On their part, students take down notes and do tests and assignments in the language of their choice. “The student has no choice but to do his best to understand lectures, write (and ‘present’ oral) examinations in either language” (Chumbow, 1980, p. 292).

It seems there is language barrier for both categories of learners because the lecturers speak (s) the language he/she is comfortable with. A francophone student may have difficulties in getting the message from an Anglophone lecturer, and conversely, an Anglophone student may be-uncomfortable with the lectures of French-speaking lecturers thereby making it difficult using French and English as medium of instruction in the faculty of education of the University of Yaoundé I. Studying in two different languages as medium of instruction seems not easy, students find themselves in a learning situation where they struggle with both language and content in the teaching and learning process.

Students may face some obstacles during their study as this is observed during class lecture, assignment presentation and Examination. Students may not understand everything because of language barrier as a result they may turn to ask the lecturer the meaning of a particular phrase, sentence or statement in the language they understand and master best, as a result certain lecturers may have no understanding or may seem not to care about the students who don't understand lectures. Therefore, the lecturer may choose to respond or not. Students may not always want to engage in interactive class activities with student speaker of the opposite language orientation.

Students may be reluctant if not boycott lectures delivered by particular lecturers because of language barrier. Students may find it difficult to understand questions set during examination, given that examination is set according to the language expression of the lecturer. Indeed, learners of bilingual state universities in Cameroon are definitely insecure individuals as they easily combine features like doubt, nervousness, hypercorrection, self-correction, erroneous perception of their own speech pattern, etc. (Labov, 2006). In University of Yaoundé I, it is proven that when English-speaking students speak in English, their French-speaking classmates tend to say sometimes: "I don't understand English, say it in French" According to (Abongdia, 2014), and vice versa for French speaking students.

Therefore, difficulties in bilingual education achievement of students. Once students can develop strategies to solve these problems, they can emerge successful in their studies without such difficulties, because they can minimize the obstacles. Learning strategies offer students creative ways to reach their goal in studying. One way to empower students is to focus on learning strategies. Learning strategies are designed to teach learners how to learn (Jonassen, 1985). Effective learning involves knowing when to use a specific strategy, how to access that particular strategy, as well as how to abandon an ineffective strategy (Jones, Sullivan Palincsar, Sederburg Olge & Glynn Carr, 1987). According to Jones et al. (1987), both less proficient and more proficient students are able to develop effective learning strategies. Bilingual education requires learning strategies to accelerate and meet up learning objectives. "It is clear that someone that has learned how to learn and someone that continues to learn throughout his/ her lifetime will be a productive member of the workforce" (Drucker, 1994 as cited in Weisburg & Ullmer, 1995).

Thus learning strategies such as student's interaction, self-motivation, and personal effort might go a long way to facilitate learning process of students. Student's interaction:

Student's interaction may facilitate learning process of students, because interacting with friends and asking for assistance may help students to solve problems faced with in their studies. Self-motivation: Self-motivation may as well facilitates learning process of students because they can stand on pressure from overwhelming school activities such as homework from different lectures, if one has no self-motivation, the student is not going to go through the difficulties faced with two languages of instruction. Personal efforts: personal efforts may equally help facilitate students learning process because it helps students to work hard by putting in extra time and effort in their study. Such personal efforts are done by reading extra books and by being regular at school and lectures. Therefore, the topic aims to investigate: learning strategies and students' bilingual achievement in the faculty of education of the University of Yaoundé 1. The research question guiding the present study is:

1.3. RESEARCH QUESTIONS

➤ **Main Research Question**

Is there a relationship between learning strategies and students' bilingual achievement at the Faculty of Education of the University of Yaoundé 1?

➤ **Specific Research Question:**

- Is there a relationship between self-motivation and students' bilingual achievement?
- Is there a relationship between student's interaction and students' bilingual achievement?
- Is there a relationship between personal efforts and students' bilingual achievement?

1.4. RESEARCH HYPOTHESIS

Both the alternative and statistical hypothesis are used in this study. The alternative hypothesis is what the researcher wishes to verify while the statistical hypothesis is the one the researcher wishes to establish after carrying out an investigation.

➤ **General Research Hypothesis**

Ha: There is a relationship between learning strategies and students' bilingual achievement.

➤ **Specific Hypotheses**

Ha1- There is a relationship between self-motivation and students' bilingual achievement.

Ha2- There is a relationship between student's interaction and students' bilingual achievement.

Ha3- There is a relationship between personal efforts and students' bilingual achievement.

1.5. OBJECTIVE OF THE STUDY

➤ **Main Objective**

This study is set to investigate the relationship between learning strategies and students' bilingual achievement in the faculty of education of the University of Yaoundé I

➤ **Specific Objectives**

- To ascertain the relationship between self-motivation and students' bilingual achievement
- To find out the relationship between student's interaction and students' bilingual achievement
- To examine the relationship between personal efforts and students' bilingual achievement

1.6. SIGNIFICANCE OF THE STUDY

This study has several significance as follows:

- To the university, this study acts as a guide to help review programs by recruiting bilingual lecturers to facilitate teaching and learning process.
- To book writers, the results of this study would challenge them to make books that are written in English/ French.
- To lecturers, the results of this study will help them to find new teaching techniques and strategies and to be more flexible as this is going to facilitate teaching and learning process, by knowing the learning strategies used by students. To know the ability and skill of students who study in bilingual education system and to help them develop this skill effectively.
- To the students, this study will give reference in learning strategies to reach good achievements. Especially for those in bilingual education system. Moreover, suggestions for several learning strategies also revealed and hopefully students are able to implement

and analyze some problems they may face and fine out ways to solve them. Also it is going to give contribution for students in elaborating better learning strategies.

- To the researchers, the findings of this study will motivate to research further on students learning strategies and bilingual education achievement. And to suggest better learning strategies to help facilitate learning process of students in the bilingual education system.

1.7. DEFINITION OF KEY CONCEPTS

For clear and precise reasons, it is necessary to explain some basic concepts used in this study. To avoid misunderstanding and to better understand this study, some definitions are provided as the following: Bilingual, bilingual education, learning, learning strategies.

▪ **Bilingual Education**

Bilingual education is defined as the use of two languages as media of instruction, or in other words, the use of two languages to teach subjects other than languages themselves (Hornberger, 1991; García, 1997)

▪ **Academic Achievement**

According to Dictionary of Education Carter (1959) academic achievement means the knowledge attained or skills developed in school subjects, usually determined by test scores or by marks assigned by teachers or both.

▪ **Learning**

Hilgard, Atkinson and Atkinson (1979) Learning may be defined as a relatively permanent change in behavior that occurs as the result of prior experience. Learning is either a simple change in behavior or a relatively permanent change in behavior that is brought about by experience and interaction of other factors (Fontana, 1988). Learning is also defined as a relatively permanent change in behavior with no emphasis on experience (Burn 1995, p. 99).

▪ **Strategy**

The word strategy comes from the ancient Greek word *strategia*, which means steps or actions taken for the purpose of winning a war. The warlike meaning of *strategia* has fortunately fallen away, but the control and goal- directedness remain in the modern version of the word (Oxford, 1990).

- **Learning Strategy**

According to Oxford (1990) “Learning strategies are operations employed by the learner to aid the acquisition, storage, retrieval, and use of information.”

Learning strategies are “the techniques and skills that an individual elect to use in order to accomplish a specific learning task...such strategies vary by individual and by learning objectives” (Fellenze & conti, 1989).

In this research, the learning strategies used by the students who study in two language of instruction become our concern. Our focus in this study is on technics used by students to study different tasks to ameliorate learning process.

This chapter has shown the research problem, research question, hypothesis, objectives, and significance of the study and the definition of key concepts. The research hypothesis will be used to establish the relationship between the independent and the dependent variable after data collection and analysis.

CHAPTER 2: REVIEW OF RELATED LITERATURE AND THEORETICAL FRAMEWORK

In this chapter, the researcher examines literature established on learning strategies and achievement. This research work is titled “learning strategies and students’ bilingual achievement”. There has been an increased concern about the learning strategy used by students to increase performance and to achieve learning objectives in Cameroon. Many researchers have taken a lot of interest in the study of learning strategies, as a result, much literature has been written on these. The following section elaborates on the research problem to see what other writers have written concerning the topic under investigation.

2.1. LEARNING STRATEGY

It is not simple and easy to define the term “Learning Strategy”. There are a lot of definitions about learning strategy which have been defined by experts who concern on this matter. According to Longman Advanced American Dictionary (2007) the word “learning” means knowledge gained through reading and study, and “strategy” means a well plan actions for achieving an aim. According to Richard, Platt, Platt (1998) learning strategies is “Intentional behavior and thoughts that learners make use of during learning in order to better help them understand, learn or remember new information. These may include focusing on certain aspects of new information, analyzing and organizing information during learning to increase comprehension, evaluating learning when it is completed to see if further action is needed.” Weinstein and Mayer (1986) characterize learning strategies as a process in which the learner does not passively accept the stimuli offered by the teacher, but instead as a process in which the student is active.

Learning strategies are “procedures for acquiring, organizing, or transforming information” (Alexander, Graham, & Harris, 1998) that can be used to succeed in one’s study. For students, it is important to know how to study in a way that the acquired knowledge and skills endure (Weinstein & Underwood, 1985). Knowing which learning strategies are most helpful for academic success is not only important for students, but also for their instructors, who can implement effective supportive techniques in their curriculum (Donker, de Boer, Kostons, Dignath van Ewijk, & van der Werf, 2014).

According to cognitive learning theories, learners are active participants in the learning and teaching process rather than passive participants. They do not just receive

information from teachers as learning process involves learners processing information which includes mental activities (Hosenfeld, 1976; O' Malley & Chamot, 1990; Oxford, 1990). The aim of using strategies is to “affect the learners motivational or affective state, or the way in which the learner selects, acquires, organize, or integrates new knowledge” (Weinstein & Mayer, 1986, p. 315).

Oxford (1990, p. 7) Explained, “Strategies are especially important for language learning, because they are tools for active, self-directed involvement, which is essential for developing communicative competence.” strategies can make learning “easier, faster, more enjoyable, more self- directed, more effective, and more transferable to new situations” (Oxford, 1990, p. 8). To this thought, Allwright (1990) and Little (1991) added that learning strategies help students develop autonomy in the language learning process, becoming lifelong learners.

Learning strategies, the choices made by students to achieve success in the acquisition of knowledge, are “specific actions, behaviors, steps, or techniques – such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task – used by students to enhance their own learning” (Scarcella & Oxford, 1992, p. 2). These actions, behaviors, steps, or techniques make students develop metacognition and provide the autonomy both teachers and students seek. Having said this, it is necessary for students to know the different types of strategies, how to use them, and why to use them, Cano de Araúz (2009). The ultimate teaching goal for successful language performance is to empower students as autonomous learners through the use of both direct and indirect learning strategies. Instances of autonomy are evident as learners grow both psychologically and emotionally and are able to manage their own learning process by taking effective actions (O'Leary, 2014) it is evident that employing learning strategies is of great importance in bilingual education.

Several definitions above indicate that learning strategy has wide range including many aspects which attempt to focus on a goal. These goals require students to think, understand, question and find solutions to problems, and seek ways to make what they learn more lasting (Akınoğlu & Bakır, 2003). However, experts on education still question why some students do not employ learning strategies effectively. Schechtman (2019, as cited in Goetzke, 2019)

2.2. TYPES OF LEARNING STRATEGIES

Liang as cited in Gestanti (2017) mentions four factors influencing students in choosing learning strategies. These are learner factors (learners' thought, language learning styles, ages, gender, and students' motivation); situational factors (learning setting and task types); academic factors (academic major); and cultural background (nationality and ethnicity). It is not surprising that students can use a wide variety of strategies in the learning process. Presumably, there may be as many strategies as the number of students. It is because each student selects and employs a different strategy depending upon instructional variables such as individual differences, types of domains, teaching methods, amount of time, learning technologies, kinds of feedback, required level of mastery, ways of measurement. Needless to say that these variables are also important from the point of designing effective, engaging, and efficient instruction (Milano & Ullius, 1998). Learning strategies are intentionally used and consciously controlled by the learner Pressley and McCormick, (1995).

Different classifications are made for learning strategies. For instance, learning strategies are divided into deep, surface, and achieving strategies (Biggs, 1987), or into strategies related to cognitive, motivational, and self-regulation components of strategic learning (Weinstein, Schulte, & Palmer, 1987). Another widely accepted classification was first described by McKeachie, Pintrich, Lin, Smith, and Sharma (1990) who classified three types of learning strategies: cognitive strategies, metacognitive strategies, and resource management strategies.

Cognitive strategies include both simple and complex strategies such as (rehearsal, organization) and are directly applicable to a certain task or course (Alexander et al., 1998). Metacognitive strategies are strategies in which students think about their thinking. These strategies include planning, monitoring one's own understanding, and modifying one's own mental processes (Duncan & McKeachie, 2005; Zimmerman, 2002). Resource management strategies are non-cognitive strategies including effort regulation (i.e., persisting in studying in the face of dull, hard or uninteresting material), managing both time and place to study, seeking help from teachers or peers, and working together with other students or friends (Duncan and McKeachie (2005).

The spectrum of learning strategies expands from simple repetition to internal motivation of learners. Categorically stating, Weinstein and Mayer (1986) classify them into

five major groups. These groups include strategies of rehearsal, elaboration, organization, metacognition, and motivation. The first three categories of this classification also have sub-clusters of basic and complex activities. The present study merged these sub-clusters and employed the five major groups of strategies as described by Simsek (2006).

Rehearsal strategies cover activities for identifying and repeating important segments of the given material. Memorizing, loud-reading, listing concepts, highlighting, putting special marks, underlining, using mnemonics, and taking personal notes are some examples of the strategies in this category.

Elaboration goes beyond the given content and extends it with additional information coming from the student. Using new words in a sentence, paraphrasing information, summarizing, matching, applying analogies, generating metaphors, making comparisons, writing questions, and forming mental images are some examples of elaboration strategies

Organization includes activities of reviewing and restructuring the presented material. The student finds the existing structure of the content inappropriate and produces alternative structure. Outlining, creating tables, classifying, re-grouping, connecting pieces, generating concept maps, and listing differently are common strategies in this category.

Metacognition usually deals with self-awareness of a student about his/her own capability in a particular learning area. The student evaluates his/her performance and tries to come up with better ways of learning. Self-critique, taking responsibility, personal reflection, individual monitoring, and changing study habits are some examples of metacognitive strategies.

Motivational strategies contain the student's perceptions and conscious efforts to perform and feel better. Attention focusing, directing anxiety, effective time management, reducing stress, developing interest, encouraging internal motivation, and setting meaningful ideals are several examples of strategies in this category.

In order to maximize the cognitive learning strategy, student needs to figure out several tactics which enable to help them. Cognitive tactics are the tools used by a student to solve specific problems or complete a particular task. They include rehearsal, transformation, organization, and motivation tactics (Argon, 1997).

Moreover, seeking help from written material is a non-social correlate of interpersonal help seeking, because it means to obtain information from written documents, manuals, computer programs and other non-social sources. Practical application is strategies to develop knowledge by trying something out in practice, and it is something more than mental activity or active help-seeking (Warr & Downing, 2000). Behavioral learning strategies is important for student in associating with their capability in doing something or solving problems. By gaining help from others, will ease them in solving such obstacles they face.

According to Svinicki (2004, p.185) as cited in Boroch, Hope, Smith, Gabriner, Mery, Johnstone and Asera (2010, p. 85) that “prior knowledge impacts what learners pay attention to, how they perceive and interpret what they are experiencing, and how they store new information based on what they already know.” Another strategy according to Zimmerman and Pons (1986) is social assistance and reviewing previously class notes and notes on text material. This strategy is usually used by several students related to those who pay full attention to the lecturers’ speech. When they listen for some important issues and or facts, they take some notes in order the subject to be reviewed after the class.

The study by Tomar and Jindal (2014) described seven effective learning strategies as follows: (1) Determine the information that is most significant by extracting keywords, ideas and models. (2) Make notes that are more frequently used within classroom time, which help students to recall the information mentioned by the lecturer. (3) Retrieve relevant information associated with the constructivist learning approach, which relies on making associations among prior information and newly acquired information. (4) Organize the content and material using the specific plan and obvious objectives previously formulated by learners. (5) Elaborate on the content of the material and course sources, extract conclusions and extrapolate the information. (6) Summarize the information into general ideas and concepts and determine the more important relationships and conceptual definitions. (7) Monitor their memorization and comprehension periodically to ensure their understanding and their knowledge.

The study of Montero and Arizmendiarieta (2017) also explained 10 learning strategies consisting of elaboration, time and effort, perseverance, organization, classmates’ support, metacognition, self-questioning, the study environment, repetition and instructors’ help. Juste and Lopez (2010) identified seven learning strategies that include the planning and reinforcement of self-esteem, classification, problem-solving, repetition, cooperation,

deduction and inference, and prediction and assessment. Apart from identifying specific strategies, Muelas and Navarro (2015) classified strategies into four main categories (i.e. information acquisition strategies, information coding strategies, information retrieval strategies and processing support strategies), while Vega-Hernandez, Patino-Alonso, Cabello, Galindo-Villardón and Fernández-Berrocal (2017) identified three main categories of learning strategies: cognitive and learning control strategies, learning support strategies and study habits.

Furthermore, some studies have attempted the classification of learning strategies into micro and macrostrategies (Jimenez, Garcia, Lopez-Cepero, & Saavedr, 2017). Planning and self-regulation are the main pillars of macrostrategies while summarizing and highlighting information are related to tasks and situations that are present in microstrategies. According to Nikou and Economides (2019), homework is one of the main examples of a microlearning strategy, and this explains why microstrategies are often used among students. Microlearning delivers learning through small and short units within short, focused activities.

In microlearning, students summarize and highlight content to obtain smaller units, such as definitions, formulas and brief paragraphs. Conversely, the concept of macrostrategies is seen as a set of approaches encompassing monitoring, revising, checking and self-assessment. Macrostrategies are more general and developmental, and they cannot be directly defined. Another type of learning strategies was proposed by Rosario, Nunez, Trigo, Guimaraes, Fernandez, Cerezo, Fuentes, Orellana, Santibenez, Fulano, Ferreira, and Figueiredo (2015) who stated that students have to be self-regulated to control their learning and effectively implement learning strategies. Therefore, students must acquire three types of knowledge: declarative, procedural and conditional knowledge. Declarative knowledge includes information about various learning strategies. Procedural knowledge includes knowing the appropriate way to apply the different learning strategies. Finally, conditional knowledge identifies the proper context to implement a specific learning strategy.

Apart from identifying and classifying the different learning strategies that students employ, a number of studies were carried out to examine the different preferences among students when adopting learning strategies. Diaz, Zapata, Diaz, Arroyo and Fuentes (2019) revealed that studying in a group, learning through graphic expression and focusing on information synthesis are most commonly used by university students. In a recent study, Tan (2019) found that students rarely used surface or strategic learning strategies, while they

frequently used deep learning strategies, but at a moderate level, thus exhibiting less interest in reading and solving word and numeric problems in math. Vega-Hernandez et al (2017) also explored the differences in learning strategy utilization among students according to gender and age and found that male students preferred learning support strategies and study habits, while female students used cognitive and learning control strategies more frequently.

Subject area has also been found to have an effect on the use of learning strategies according to Muelas and Navarro (2015) who investigated student strategy use in three main subject areas: language, math and social sciences. In the language subject, the information coding and information recovery strategies were found to be the most significantly related to higher achievement. The coding strategy was the only strategy that had a significant correlation with higher achievement in math and social science subjects. Muelas and Navarro (2015) argued that teaching learning strategies can be a remedial solution for low student achievement, and they illustrated how to exploit brain competencies through learning strategies to improve academic achievement.

There are also experimental studies examining the effects of particular strategies on learning. Wade and Trathen (1989) investigated the impact of highlighting ideas in a text on perceiving the importance of those ideas and learning them. They found that effective study requires more than underlining, emphasizing, and note-taking. Questions were useful for all students, particularly for low-ability learners. Wittrock and Alessandrini (1990) investigated the influences of reading text, using analogies, and producing summaries on analytical and holistic capacities.

Results showed that groups employing analogies and summaries outperformed those employing reading only strategy because those strategies stimulated higher level of analysis and synthesis. Hooper, Sales and Rysavy (1994) further found that writing summaries produced higher performance than using analogies for university students because the students were not really successful in producing good analogies. Braten and Olaussen (1998) investigated the relationship between motivational beliefs and the use of learning strategies. They found that when students work hard toward accomplishing a goal, they employ more and better strategies.

McWhaw and Abrami (2001) confirmed that students with high level of interest use more strategies than those with low level of interest in a learning area. This is consistent with

the result that students have more power or control over the use of strategies than teachers (Eshel & Kohavi, 2003). Sizoo, Malhotra and Bearson (2003) compared learning strategies of students in distance education and traditional face-to-face education. They found no difference for male students in both modes of instruction. However, female students in distance education programs were more successful than their counterparts in traditional programs. The literature also suggests that online learners usually have higher motivation and use more advanced strategies than traditional classroom learners.

There is considerable amount of research studying what types of instructional approaches can be employed to accommodate students' learning strategies, how they can be used with different groups of learners, which strategies are functional in various areas of learning, and what kinds of results have been obtained from actual practices. The overall results of the studies are highly encouraging. In general, successful students employ more and better learning strategies than unsuccessful students (Cho & Ahn, 2003; Paris & Myers, 1981; Tait & Entwistle, 1996).

Learning strategies interact with personal characteristics of students. There is no ideal strategy which generates success in all learning situations. Students should be trained to develop an understanding and skills for using appropriate strategies that satisfy their needs (Weinstein, 1987). Constructivist learning approaches are usually more effective and engaging than behaviorist approaches to accommodate individual strategies of learners. Interactive technologies provide increased opportunities for the use of learning strategies generating better academic achievement and attitudes (Eshel & Kohavi, 2003). Teaching strategies should be compatible with learning strategies for successful and satisfying results in educational practices Garner (1990). Zimmerman (1989) identified several specific self-regulated learning strategies including:

- **Self-evaluating:** Students assess the quality of their work.
- **Organizing and transforming:** Students manipulate content to improve learning.
- **Goal setting:** Students set large and small related objectives and map out a process to achieve them.
- **Seeking information:** Students find school-related information from academic sources rather than social resources.

In regards to academic achievement, studies have also looked at other psychological aspects in the context of effective use of learning strategies. Tan (2019) concluded that the use of learning strategies has a moderating effect on the relationship between self-concept and problem-solving skills in students studying mathematics. Similarly, Montero and Arizmendiarieta (2017) found that remedial interventions in enhancing the use of learning strategies improved student motivation and learning beliefs. Vega-Hernandez et al. (2017) also found the use of learning strategies had a positive relationship with perceived emotional intelligence (repair, attention and clarity).

2.3. LEARNING STRATEGIES AND STUDENT ACHIEVEMENT

Dictionary of Psychology (Chaplin, 1965) defines educational or academic achievement as specified level of attainment proficiency in academic work as evaluated by the teacher, by standardized tests or by combination of both. Academic achievement could determine a better individual success journey in working life. According to Richardson, Abraham, & Bond (2012), academic achievement or performance is defined as a representation of numerical grade or point average from accomplishing a certain standard of results from grading of academic assessments (assignments, examinations, subject, or degree).

Learning strategies are much beneficial in learning process. Learning strategies facilitate the students to reveal their own way of learning, recognize their identity as “learners” and be aware of their difficulties in learning. In addition, learning strategies enable the students to communicate with others so that they can stimulate their previous knowledge in holding the materials and correlating the new information. Learning strategies not only lead the students to accomplish the examination well but also is more profitable in the future because it is lasting and functional (Arulselvi, 2006).

Zimmerman (1990) reported that learners, who applied learning strategies in their learning process, are differentiated by their systematic utilization of cognitive, metacognitive and behavioral strategies; by their ways to give feedback responses about the effectiveness of learning in addition to self-perception of their academic achievements. Flavell, (1976) past studies reported that those learners who were taught learning strategies were more likely to perform better and achieve higher performance on their academic measure as compared to those who had not received any formal instruction on learning strategies; the likelihood of success in their professional in addition to their academic career is high (Lubuhn,

Zimmerman, & Hasselhom, 2010). Academic performance is influenced by many factors. According to Zimmerman and Kitsantas (2005), academic performance is highly linked with higher self-confidence. Self-confidence could boost the student's spirit to demonstrate better responsibility in completing any given task successfully. Hence, students' attitude towards their academic is vital as it could lead to greater performance.

Examining the related literature shows that there are studies reporting significant relationships between learning strategies and academic achievement (Çelikkaya & Kuş, 2010; Liu, 2009; Liu et al., 2008). Some studies established that the learning strategies could be a good predictor of academic achievement (Pennequin, Sorel, Nanty, & Fontaine, 2010; Muelas & Navarro, 2015; Pinto, Bigozzi, Vettori, & Vezzani, 2018; Tan, 2019), while others found that the relationship between learning strategies and academic achievement was negative such as in Vettori, Vezzani, Bigozzi & Pinto (2020).

Learning strategies were found to significantly predict academic achievement Shaver (2016). A 10 years' meta-analysis study (between 2004 until December 2014) was conducted by Broadbent and Poon (2015) in determining the correlation between self-regulated learning strategies and academic achievement. This study was carried out in a tertiary education environment to identify which learning strategies are adopted by students within the online setting in reaching academic accomplishments. The findings revealed that four of the learning strategies (effort regulation, time management, metacognitive and critical thinking) have a significant relationship with academic performance. Meanwhile, the remaining four subscales including rehearsal, elaboration and organization had the least correlation and peer learning had moderate positive effect with academic performance.

Similarly, in the context of nursing undergraduate students, Rodríguez, Morales and Manzanares (2016) found that the relationship between meta-cognitive strategies and academic achievement was positively significant. The strength of the relationship, however, is low. In other facet of study, Hamid and Singaram (2016) noted in their research that three learning strategies subscales (learning strategy component, critical thinking and time and study environment) were significantly poorly correlated to academic performance of medical students. In the same vein, in a study among English as Foreign Language (EFL) learners in Iran, Varasteh, Ghanizadeh, & Akbari, (2016) concluded that cognitive and metacognitive strategies have positive relationship with language achievement.

Furthermore, a few studies did not find any association between learning strategies and student performance (Tariq, Khan, Afzal, Shahzad, Hamza, Khan & Shaikh (2016). In their study, Chiu, Chow and McBride-Chang (2007) found that different contextual factors such as the economic and cultural background of the students may substantially affect the association between learning strategies and academic achievement. Ali, Medhekar and Rattanawiboonsom (2017) argued that student achievement in a higher education institution can be improved through several critical factors namely, the quality of the staff, the inclusion of information technology and appropriate learning strategies. Hence, a number of local studies have investigated the role and impact of instructors in promoting student achievement and learning. Bashir, Lockheed,

Ninan and Tan (2018) asserted that pedagogical practice and instructor knowledge play a critical role in increasing student learning. Similarly, Buchori, Setyosari, Dasna, Degeng and Sadijah (2017) established that instructors' strategies and techniques determine students' roles, activities and achievement in the learning process and likewise foster students' responsibility for their learning. Other studies investigated learning strategies which can help students acquire information and take an active role in the learning process (e.g. McMullen, 2009; Shehzad, Razzaq, Dahri, & Shah, 2019).

The impact of learning strategies on academic achievement was studied by (Dikbaş & Kaf Hasırcı, 2008; Kayan Fadlelmula, 2011; Tunçer & Güven, 2007; Washburn, Sielaff, & Golden, 2016; Yıldız, 2003; Yorulmaz, 2001). There are studies revealing significant relationships between achievement goal orientations and academic achievement (Akin, 2006; Buluş, 2011; Coutinho, 2007; Jiang et al., 2014; Skaalvik, 2018; Üzbe, 2013). However, achievement goal orientations were found to significantly predict feelings of success Pekrun, Elliot, & Maier, (2009) and academic achievement (Chan et al., 2012; Richey et al., 2018).

Past studies have demonstrated that learning strategies are positively correlated with students' academic performance. (Alexander, Graham, & Harris, 1998; Claire Ellen Weinstein, Jenefer Husman, & Douglas R. Dierking, 2011; Hattie, Biggs, & Purdie, 1996; Michael Pressley et al., 1989) Relevant literature has described various learning strategies, ranging from very basic to more complex approaches, to synthesize knowledge or developing conceptual framework. (Mayer & Alexander, n.d.; M Pressley, 2002) studies have found that students use various type of learning strategies to improve their academic performance. Ruffing, Wach, Spinath, Brünken, and Karbach (2015) reported sex differences between the

different learning strategies. They used a German adaptation of the MSLQ-B, the *Lernstrategien im Studium* (LIST; Wild & Schiefele, 1994), consisting of 11 subscales. Women scored significantly higher than men on effort, organization, rehearsal, time management, and meta cognition, and significantly lower on relationships and critical evaluation. Also women tend to score higher on academic performance than men (Duckworth & Seligman, 2006; Richardson et al., 2012; Robbins, Lauver, Davis, Langley, & Carlstorm, (2004).

Research has also been conducted on self-testing and self-regulation learning strategies. Self-testing, or the act of repeatedly recalling information, has been shown an effective way to study and recall information for assessments (Gates, 1917; Jones, 1923-1924; Spitzer, 1939; Tulving, 1967). Carrier and Prashler (1992) conducted a series of experiments on self-testing, finding that practice in retrieval results in better retention of information. Hartwig and Dunlosky (2012) surveyed 324 undergraduates and demonstrated that students use of self-testing was positively associated with GPA. Despite the proven effectiveness of self-testing and retrieval strategies, Karpicke, Butler, & Roediger, (2009) found that the majority of college students do not use method, preferring to reread their notes. It was concluded that many students were unaware that more active retrieval practices enhance the learning process and suggested that instructors inform students about the benefits of retrieval and self-testing.

Many college students have also learned to exert control over their time and schoolwork schedules (Pintrich & Garcia, 1993). students who manage their study time and learning gain an advantage in higher education over students who have not developed these self-regulated learning strategies (Zimmerman, 1989). Self-regulation is considered critical for academic success. For example, Zimmerman and Martinez-Pons (1988) found that the use of self-regulated strategies was highly correlated with students' academic performance.

Previous studies have contended that help seeking (a student seeks for assistance and guidance from educators) and peer learning strategies (a student seeks for assistance from peers), are also part of attaining academic achievement (Akcaoglu, 2016). In contrary, different results were found in previous studies for the role of peer learning and help seeking. Peer learning and help seeking were seen to be not significantly correlated towards academic performance (Radovan, 2011).

Similarly, Al-Alwan (2008) discovered that there is no significant difference of peer learning and help seeking among high and low performers of undergraduates' students in Al-Hussein Bin Talal University in Jordan. In a recent study, Ulstad, Halvari, Sørebo & Deci (2016) examined the role of motivation and learning strategies in mediating student participation and performance. In the context of physical education classes at secondary schools in Norway, the findings revealed that students who applied certain learning strategies such as effort regulation, absorption, peer learning and help seeking in physical education classes participate more and show better performance. Another recent study was carried out by Akcaoglu (2016) to explore the connection between learning strategies and self-efficacy among teacher candidates in an education faculty in Turkey. Using the Motivated Strategies for Learning Questionnaire (MSLQ), the study found that learning strategies (rehearsal, organization, metacognitive self-regulation, time/study environmental, peer learning and help seeking) were significantly correlated to self-efficacy.

Based on the literature reviewed on learning strategies, and while studies on learning strategies continuous to emerge, the relevancy for these studies has not been determined for specific educational context such as bilingual achievement in the faculty of education of the university of Yaoundé 1. It is clear that there are a number of studies that investigated different aspects of the use of learning strategies by students, but not in relation with students' bilingual achievement. Little or no research is done based on learning strategies and students bilingual achievement, especially in the University of Yaoundé I Cameroon context. Hence the current study contributes to closing this gap in the literature by investigating on the topic: learning strategies and students' bilingual achievement in the faculty of education of the university of Yaounde 1. It is expected that the results of the research will help learning strategies to reach good bilingual achievement of students.

2.4. MOTIVATION AS A DRIVE TO LEARNING STRATEGIES

Motivation is an important aspect on how students study. According to Svinicki (2004) as cited in Boroch et al. (2010, p. 53) asserts that "when the learner feels in control of the learning process, it is more likely that he or she will be motivated to engage or try." This statement shows when the students feeling good at their way of learning, the student's motivation will raise and otherwise, it could bring down when the students feel bored or being stuck of information and knowledge. In accordance to the goal of students, motivation leads to a better path. When certain goal is fixed, he or she needs to have several plans or steps in

order to reach and maintain it with full of responsibility. Kleinbeck, Quast, and Schwarz (1989, p. 54) as cited in Borocho et al. (2010, p. 54) explain that “Student will perform better if they know what goals they are seeking and if those goals are personally important to them.”

The motivation of students is indispensable and requires encouraging their actions towards achieving the designated goals (Pecjak & Kosir, 2018). Motivation is significant in increasing the performance of individuals through stimulating them to accomplish their goals (Lemos & Verissimo, 2014). Motivated people have a positive outlook and are excited about what they are doing (Tokan & Imakulata, 2019). According to Abdurrahman and Garba (2018) motivated students know they are investing their time in something genuinely worthwhile and need to improve their performance.

➤ **Students Intrinsic Motivation**

Intrinsic motivation is essential and pushes learners to learn without rewards because the need is innate and depends on their desire to know something (Abuhamdeh, Csikszentmihalyi & Jalal, 2015). Teachers have limited effects on learners’ intrinsic motivation since they are from various backgrounds and the sole way to motivate learners is to make the class a supportive environment (Putra, Cho & Liu, 2017). The intrinsic motivation has its reward and students voluntarily try to learn what is truly necessary for them (Cerasoli & Ford, 2014). Some of the inherent motivations are one’s self-concept, self-respect, self-confidence and emotional needs (Gerhart & Fang, 2015).

➤ **Students Extrinsic Motivation**

The extrinsic motivation involves emphasizing much on the external need to urge students to participate in learning activities like an assignment or performing something that pleases teachers (Tokan & Imakulata, 2019). When learners learn something due to the prizes, they will have a high motivation to enter their classes and will also quickly get the aim that is set for them (Gbollie & Keamu, 2017). According to Froiland and Oros (2014), the extrinsic motivation has a negative effect on the learners because they do not learn with their firm intention, but they learn because they are pushed by the concern in the rewards or the punishment. Ahmed (2016) established that extrinsic motivation evolves from outside rewards such as money or grades. For instance, a learner who does his/her assignment only because he/she fears parental sanctions for not doing it is extrinsically motivated because he/she is doing the work to get the separable results of avoiding penalties. Similarly, a learner

who does the work as he/she individually believes it is valuable for her chosen career is also extrinsically motivated because he/she too is doing it for its instrumental value. Also Based on Corpus and Wormington (2014), some of the extrinsic motivation includes rewards and promotion or giving leadership positions.

2.5. BILINGUAL EDUCATION

Bilingual education is the use of two languages in the instruction and assessment of learners (Garcia, 2009). Bilingual education to Borich (1996) refers to a mix of instruction in two languages. This simply explains a teacher giving instruction and applying teaching skills and methods in two languages for example, French and English. To McCarthy (2010), it involves teaching in two or more languages in a school. This means students to learn regular school subjects in more than one language. It is also viewed in four levels; individual level, family level, societal level and school level. The individual level defines a person's bilingual and bicultural development. The family level looks at bilingual child- raising, a family that communicates in two different languages. The level of society is concerned with language minorities and government policies and the bilingual school level talks about schools that use two different languages as a means of instruction.

Bilingual education is also defined as the use of two languages as a medium of instruction for a learner or group of learners in a formal school system. Malarz, L. (1998) acknowledges that it is totally impossible to separate language and culture; hence they see bilingual education as a concept of bicultural education. In this light the US Congress (1992) defines bilingual education as a program of designed instruction for LEP (Limited English Proficiency) children in primary and secondary schools, given instruction in English and study of English language with the aim of allowing the learner to achieve competence in English language, yet maintaining the native language of the learner who is LEP and instruction is given in all the subjects with consideration for the cultural heritage of such learners to allow them progress effectively in their learning experiences even amongst the English Proficient learners.

Bilingual education differs from traditional language education in which a “foreign” or “second” language is taught. Firstly, in bilingual education the two languages are used as a medium of instruction. However, in traditional language education programs the additional language is explicitly taught as a subject. As such, bilingual education is first and foremost an

educational approach to educate students holistically, with language and literacy development in two languages as an educational goal. With the additional language also used to educate meaningfully, the epistemology about language in bilingual education often differs from that of traditional language education. Traditional language educators see language as a system of standardized structures through which students listen, speak, read, and write. In contrast, bilingual educators focus on the development of language practices; that is, on the languaging of students (Becker 1995; Maturana and Varela (1973), which is a product of social action and consists of fluid and flexible resources through which students make meaning of what they are learning (more on languaging to follow).

A bilingual person is someone who knows and uses two languages, or more specifically, one who speaks, reads, or understands two languages equally well (Richards, J. Platt, & H. Platt, 1992). According to Siguán and Mackey (cited in Moreno, 2009) a bilingual person is someone “who, besides his/her L1, possesses a similar competence in a different language, and is able to use either of them within any circumstance with similar effectiveness” (pp. 17-18).

2.6. TYPES OF BILINGUAL EDUCATION

There are many different types of bilingual school based on Baker (2007, p. 132)

- **Transitional Bilingual Education**

This program consists in teaching minority children in their language until they are thought be proficient enough in the majority language to cope with it in mainstream education. This type of education program was most popular in the United States for the education of language. Initially, the students’ minority language is use, with the majority language being taught as a second language, most often by the same bilingual teacher. Eventually, students are transferring out of the bilingual classroom to a monolingual one. The aim of this program is still that of assimilation, it just slows down the submersion, by constantly increasing the classroom use of the majority language.

Transitional bilingual education (TBE) can be split into two major type: early exit and late exit (Remirez & Merino, 1990 as cited in Baker, 2006). Early exit TBE refer to two years’ maximum help using mother tongue. Late-exit TBE allows 40 percent of classroom teaching in the mother tongue until the sixth grade.

- **Mainstream Education (with foreign language teaching).**

This type of education was popular among parents who want their children to become fluent in a second language not taught in the educational system. Students attend school in the majority language, but in addition to supplementary classes or school on weekends or after school where the foreign or second language was taught. For example, all over the world there are supplementary private English schools where students receive supplementary instruction in English. There are also schools which offer languages as an enrichment activity after school hours (Gracia in Coulmas, 2000).

- **Separatist Education.**

In this type of program, instruction is through the medium of the minority language only, because a minority language tends to detach itself from the majority language. although the majority language was often taught as a subject in withdrawal classes. The purpose of this type of education is to prepare the language minority to pursue political autonomy. As an open educational alternative, this type of program was rare.

- **Immersion Education.**

This program has been designed for language majority students or speakers of high-status language who wish to become bilingual. Initially, instruction is solely through the medium of minority language with a bilingual teacher (Gracia in Coulmas, 2000). Progressive, the majority language is also using in instruction. Instruction through the medium of both languages continues throughout the students' education with the aim of producing efficient bilinguals. Immersion education was an umbrella term. Within the concept of immersion experience are various programs different in terms of the following aspects:

- **Age at which a child commences the experience.**

This may be at the kindergarten or infant stage (early immersion); at nine to ten years old (delayed or middle immersion), or at a secondary level (late immersion).

- **Amount of time spent in immersion.**

Total immersion usually commences with 100% immersion in the target language, reducing after two or three years to 80% per week for the next three or four years, finishing

schooling with approximately 50% immersion in the second language per week. Partial immersion provides close to 50% immersion on the second language throughout infant and junior schooling (Baker, 2006).

- **Maintenance Program.**

This type of education program used both a minority and a majority language throughout the education of language minority. Both languages are compartmentalized, most often by using different teachers for instruction that take place in different languages. Its aim was to promote the maintenance and development of the minority language and the increase knowledge of the minority history and culture, as well as the full development of the majority language and knowledge of its history and culture. Maintenance program thus provides enrichment that language minorities need and the pluralistic perspective needed by the majority society.

- **Two Way or Dual Language Education.**

This bilingual education typically occurs when approximately equal members of language minority and majority students are in the same classroom and uses both language for instruction (Baker, 2006). The aim is to produce relatively balanced bilinguals, which means efficient in both languages. The two languages are to be used in a balanced way in the classroom (alternate use of two languages weekly, daily, in subjects, etc.), so that neither becomes dominant.

- **Bilingual Education in Majority Languages.**

The Majority here would be for world spread languages like English, French, German and so on. This type of education comprises the joint use of two majority languages in a school and throughout the students' education. Such schools are in society where the majority of the population is already bilingual or multilingual or where there is a significant number of people of different nationalities who want to become bilingual. Unlike Baker's (2007) ideas, Brisk (1998; in Bialystok, 2006) distinguishes two main types of bilingual education programs. The first one is called Bilingual Education Models, which requires the usage of two languages, and tries to produce efficient bilinguals. It includes: dual language schools.

2.7. TYPES OF BILINGUALISM

The term bilingualism refers to communication of a person in two different languages. Some researchers claim that if a person can talk at least a few words in two different languages, s/he is bilingual. Others such as Kokturk, Odacioglu and Uysal (2016) defend that if a person has been raised in a dual-language environment and he/she is equally proficient in the perfect use of two different languages, he/she is bilingual. Wallner (2016) claims that bilingualism is speaking fluently in a language apart from the mother tongue. Ignatkina and Tosuncuoğlu (2020) mention that bilingualism is using two languages efficiently and in a natural flow. Luk and Bialystok (2013) state that despite a diversity of definitions of bilingualism, all agree with that bilingualism is a diverse and complex phenomenon.

The best known definitions of bilingualism, according to Moreno (2009), come from Bloomfield (1933), who states that bilingualism is the native mastery of two languages; Haugen (1953), who argues that bilingualism is the use of complete and meaningful sentences in other languages, and from Weinreich (1952), for whom bilingualism occurs when “two or more languages are used alternately by the same persons”.

Children may have two different types of bilingualism named simultaneous (sometimes called infant bilingualism) and sequential childhood bilingualism. Baker (2001) states that “this separates child who are exposed to two languages from birth from those who acquire a second language later.” To illustrate, a child whose mother is French, and father is English is referred as ‘a simultaneous bilingual’ on condition that he/she is exposed to both parents’ languages at the same time. In the context of bilingualism in the early childhood, Bialystok (2017) claims that children’s development is affected by bilingualism. Pieretti and Roseberry-McKibbin (2016) state that the population of children who are exposed to two different languages at school is increasing around the world. With the increasing number of bilingual children, bilingualism is a phenomenon to investigate. However, Baker (2001) states that “the boundary between acquisition and learning is not distinct and separate (e.g. informal language acquisition can occur in a second language class.)”. Scholars classify the types of bilingualism differently as each scholar utilizes different perspectives driving to different categories of bilingualism, because bilingualism is too broad and wide a spectrum, there would rightly be many different types of bilinguals under different dimensions of bilingualism as defined by different scholars. Below are other dimensions of bilingualism and the types of bilinguals or bilingualism.

- Age of acquisition (Butler, 2013; Hamers & Blanc, 2000; Hoffmann, 1991; Valdes & Figueroa, 1994 in Baker, 2001).

According to Hoffmann, (1991) the age the language is acquired can result in “considerable differences” (p.18). An ‘early bilingual’ may refer to an ‘infant, child or adolescent bilingual’, and a ‘late bilingual’ would be anyone beyond childhood or an ‘adult bilingual’ who picked up a L2 later on in life. Age specifications remain unclear, but some have defined it to be up to three years of age for an ‘infant bilingual’, and until the age of puberty for a ‘child bilingual’. Infant bilinguality is also known as ‘simultaneous bilingualism’, where the infant develops two languages at the same time the infant learns the meaning of language. ‘Consecutive childhood bilinguality’ for Hamers and Blanc (2000) would occur if the child has first acquired his or her first language (L1) before learning the second (L2). Brice and Brice (2009) also call this ‘sequential acquisition’, and the former ‘simultaneous acquisition’. Hamers and Blanc go further to say that the “age of acquisition plays a part not only in respect of cognitive representation but also in other aspects ..., particularly his linguistic, neuropsychological, cognitive and sociocultural development” (p.28).

- Context of acquisition (Hoffmann, 1991; Valdes & Figueroa, 1994 in Baker, 2001)

While Hamers and Blanc (2000) put this in the same category as age of acquisition, the context of acquisition refers to the way or environment in which the languages are learnt. A ‘natural bilingual’ or primary bilingual’ would have learnt two languages in a natural way from his or her family and environment, and an infant or child bilingual might fit into these types. This is also called ‘ascribed bilingualism’, and ‘simultaneous acquisition’ also applies here. The ‘secondary bilingual’ goes through formal, structured training in the acquisition of the L2, and this is also called ‘achieved bilingualism’ or ‘school bilingualism’. School bilingualism involves learning in a school environment, while ‘cultural bilingualism’ would be adults learning a L2 as a hobby, or for leisure, travel or work. ‘Sequential acquisition’ applies here.

- Order and consequence of acquisition (Hoffmann, 1991)

The order of acquisition, as the name suggests, is the order of acquisition of L1 and L2 at different times, L2 after the L1, and the consequence of this on the L1. Baker (2001) calls this the “development” (p.3) of the two languages in a bilingual. ‘Incipient bilingualism’ and

'ascendant bilingualism' both reflect the improvement in the ability of the 'additive bilingual' to use two languages after adding the L2, and the opposites are 'recessive bilingualism' and 'subtractive bilingualism', where the bilingual is in danger of losing the L1 or getting less competent or functional in the L1 because of the addition of L2. Here, however, the ascendance and recession do not refer to linguistic competence of the language alone. It also refers to the addition or subtraction of social and cognitive abilities. For example, positive consequences of the acquisition of an L2 would be the acquisition of social skills and knowledge of culture associated with the L2, and increase in cognitive abilities of managing another language. An example of negative consequences, or subtractive bilingualism, is when immigrants or their descendants live in a country where they are the minorities and their L1 is the minority language, and where they start losing knowledge of their native culture and competence of their L1 after learning L2, the main language in the adopted country. This will be discussed further in other dimensions.

- Cognitive organization (Hamers & Blanc, 2000; Hoffmann, 1991)

Hoffmann (1991) calls this the "relationship between sign and meaning, i.e. the mental organization of the speech of bilinguals" (p.19). Butler calls this the "organization of linguistic codes and meaning unit(s)" (p.113). Yet, Hamers and Blanc call this the "form-function mapping" (p.29). Weinreich's (1968) research on linguistic organization concludes that there are different ways in which a bilingual organizes semantic content and linguistic signs. In 'coordinative bilingualism', the L1 and L2 have different sets of linguistic signs and semantic content. These sets do not interfere with each other. In 'compound bilingualism', the bilingual considers similar semantic content of L1 and L2 together, but knows that the linguistic signs are different. In 'subordinative bilingualism', the L2 is learned with the help of L1. The criticism about this dimension is that there is little need to distinguish bilinguals according to how they organize language cognitively. Unless there is some way to use these distinctions to aid L2 learning, this dimension may be of little significance.

- (Relative) Competence (Hamers & Blanc, 2000; Hoffmann, 1991)

Baker (2001) calls this the "balance of two languages" (p.3), and Butler (2013) calls this the "relationship between proficiencies in two languages" (p.113). This dimension compares the general competencies of L1 and L2. A 'perfect bilingual' or 'true bilingual' is someone at the highest end of the range of definitions discussed in Section 2, with similarly

high nativelike competencies of both L1 and L2. A 'balanced bilingual' has similar competencies in both L1 and L2, and a dominant bilingual' has a superior competence in one language over the other, more often the L1. To reiterate, as Hamers and Blanc note, these competencies are all relative, and the dominance or balance does not equate to the balance of abilities of different functions within each language. Also, a balanced bilingual may not necessarily imply someone with high competencies, but only that the person has a similar level of competence for both L1 and L2.

- Functional ability (Butler, 2013; Hoffmann, 1991)

This refers to the functions and usage of the languages. Someone who has competence in more than one language is more likely than not to have different uses and functions of each language in practical life, as most of the time he or she will not be expected to use both languages at the same time for the exact same functions. A 'receptive bilingual' or 'passive bilingual' understands the L2 but may not necessarily use it well, but the term 'passive bilingual' seems to imply that the bilingual is passive in the process of understanding the L2, which is untrue because language processing is also at work even only at the receiving end of the L2. A 'functional bilingual' or 'productive bilingual' would be able to use the four skills of language - speaking, listening, reading and writing - effectively or productively in both L1 and L2, but one should be aware that there are too many possible combinations of the levels of competence across the four skills within each of the two languages. According to Baker (2001), functional bilingualism is about language production and speech events, and is a specific area of research on its own.

- Exogeneity (Hamers & Blanc, 2000)

This dimension explains perhaps the political situation of a country, in particular. 'Endogenous bilinguality' refers to that of a community that uses a mother tongue that may not be formally used in institutions. For example, native mother tongue language used only by the community in social settings but not in formal institutional settings, is an endogenous language. 'Exogenous bilinguality' consists of an exogenous language that is usually imposed politically, such as through colonialization, and from colonial history, is used only in formal institutions, with few people in the community using it as an L1. One example is English or French in a formally colonized African nation.

- Cultural identity (Hamers & Blanc, 2000; Hamers & Blanc in Butler, 2013)

A 'bicultural bilingual' would "identify positively with the two cultural groups that speak his languages and be recognized by each group as a member" (Hamers & Blanc, 2000 p .30). Some good examples are the three main races in Singapore, with ancestors from China, Malay Archipelago and India. Many Singaporeans identify themselves as having Chinese, Malay or Indian cultural backgrounds, but in general, have a strong sense of Singaporean cultural identity. A 'monocultural bilingual' would have competencies in two languages but has not adopted the culture of the L2. Cultural identity can also be an addition or subtraction, like competence. An 'acculturated bilingual' is someone who decided to renounce his cultural identity with his L1 because he eventually identifies more with the cultural characteristics of his L2, and a 'deculturated bilingual' is someone who has lost his L1 culture, but at the same time is unable to adopt his L2 culture either because he cannot identify with it (Berry, 1980 in Hamers & Blanc, 2000). Skutnabb-Kangas would consider this the attitude of the bilingual, where "self-identification or identification by others" (Hoffmann, 1991) is important for a sense of belonging as a member of that language community

- Socio cultural status of the languages (Hamers & Blanc, 2000)

The last dimension listed here, is the social cultural status that the L1 and L2 each have in the community. Butler (2013) calls this 'language status and learning environment. The *élite bilingual*', according to Valdes and Figueroa (1994), "refers to those who choose to learn another language in formal or informal settings but who will remain most of their lives in the community where their L1 is spoken" (Guerrero, 2010 p .168). The *folk bilingual*' on the other hand "become[s] bilingual involuntarily in order to survive" (Guerrero, 2010 p .168), because their L1 is not that of the majority. Valdes and Figueroa also call the elite bilingual an *'elective bilingual'*, with a choice to learn the L2, and the folk bilingual a *'circumstantial bilingual'* with little or no choice because of circumstances. Nugent (2013) states that folk bilinguals are associated with the working-class immigrant communities. The differences between these two types of bilinguals thus "raise(s) differences of prestige and status, politics and power among bilinguals" (Baker, 2001 p. 4). Lambert (1974 p.25) also considers these two types of bilingualism as additive bilingualism and subtractive bilingualism respectively. Subtractive bilingualism is especially "experienced by many ethnic minority groups who because of national educational policies and social pressures of various sorts are forced to put aside their ethnic language for a national language".

2.8. THEORETICAL FRAMEWORK

According to Luma (1983), a theory is a set of related assumption or concepts tied to somewhere to the real world of known properties or behavior, Kerlinga, (1973) in Amin (2005 p.10), defines a theory as “a proposition that presents a systematic view of phenomena by specifying the relations among variables with the purpose of explaining and predicting the phenomena.” Hoy and Miskel (1998), defined a theory as a set of interrelated concepts, assumption and generalization that systematically describes and explains regularities in behavior and educational organizations. Theories are based on assumptions and guide research by generating hypothesis that can be tested. The researcher in order to make this study clearer and meaningful uses the behaviorist theory of learning, sociocultural theory of learning, and threshold theory of bilingual education.

2.9. COGNITIVE MODEL OF LEARNING

Behaviorist frameworks have recently benefited from the inclusion of cognitive models based on the teachers’ and learners’ abilities to connect new learning with prior knowledge or understanding, evolving into metacognition models that emphasize the students’ participation in the creation of meaning and comprehension. Metacognition refers to the student’s awareness of their own learning and thinking processes (Boroch & al 2010, p. 52).

According to Svinicki (1999, p. 13) as cited in Boroch, et al (2010, p. 52) explain that metacognition was the first way of theorizing to promote the idea that the learner had to be driving the process of learning. This term shows that the learning process is in the student hand which means they think and they figure out the problems by themselves.

2.10. BEHAVIORIST PERSPECTIVE OF LEARNING

A basic understanding of behaviorism can be gained by examining the history of four of the most influential psychologists who contributed to the behaviorism: Ivan Pavlov, Edward Thorndike, John B. Watson, and B.F. Skinner. These four did not each develop principles of behaviorism in isolation, but rather built upon each other’s work. Behaviorism is primarily concerned with observable and measurable aspects of human behavior. In defining behavior, behaviorist learning theories emphasize changes in behavior that result from stimulus-response associations made by the learner. Behavior is directed by stimuli. An

individual selects one response instead of another because of prior conditioning and psychological drives existing at the moment of the action (Parkay & Hass, 2000). Behaviorists assert that the only behaviors worthy of study are those that can be directly observed; thus, it is actions, rather than thoughts or emotions, which are the legitimate object of study.

Behaviorist theory does not explain abnormal behavior in terms of the brain or its inner workings. Rather, it posits that all behavior is learned habits, and attempts to account for how these habits are formed. In assuming that human behavior is learned, behaviorists also hold that all behaviors can also be unlearned, and replaced by new behaviors; that is, when a behavior becomes unacceptable, it can be replaced by an acceptable one. A key element to this theory of learning is the rewarded response. The desired response must be rewarded in order for learning to take place (Parkay & Hass, 2000).

Behaviorism Advocates John B. Watson (1878-1958) and B. F. Skinner (1904-1990) are the two principal originators of behaviorist approaches to learning. Watson believed that human behavior resulted from specific stimuli that elicited certain responses. Watson's basic premise was that conclusions about human development should be based on observation of overt behavior rather than speculation about subconscious motives or latent cognitive processes (Shaffer, 2000). Watson's view of learning was based in part on the studies of Ivan Pavlov (1849-1936).

Pavlov was studying the digestive process and the interaction of salivation and stomach function when he realized that reflexes in the autonomic nervous system closely linked these phenomena. To determine whether external stimuli had an effect on this process, Pavlov rang a bell when he gave food to the experimental dogs. He noticed that the dogs salivated shortly before they were given food. He discovered that when the bell was rung at repeated feedings, the sound of the bell alone (a conditioned stimulus) would cause the dogs to salivate (a conditioned response). Pavlov also found that the conditioned reflex was repressed if the stimulus proved "wrong" too frequently; if the bell rang and no food appeared, the dog eventually ceased to salivate at the sound of the bell.

-Criticisms of Behaviorist

Behaviorism can be criticized as an overly deterministic view of human behavior by ignoring the internal psychological and mental processes; behaviorism oversimplifies the

complexity of human behavior. Some would even argue that the strict nature of radical behaviorism essentially defines human beings as mechanisms without free will. The behaviorist approach has also been criticized for its inability to account for learning or changes in behavior that occur in the absence of environmental input; such occurrences signal the presence of an internal psychological or mental process. Finally, research by ethologists has shown that the principles of conditioning are not universal, countering the behaviorist claim of equipotentiality across conditioning principles.

Behaviorism was developed as a counter to the introspective approach that relied primarily, if not entirely, on internal, self-reflection on conscious, mental activity. While radical behaviorism may be quite limited in its explanatory power, it served an important role in allowing psychology to develop a scientific pursuit of knowledge about human nature and behavior. Nevertheless, the link between stimulus and response is not just a simple, direct, cause and effect relationship. Factors beyond the stimulus are involved in determining the response. Actions occur based on purpose, and purpose is determined by the mind of the subject. Thus, a more complete understanding of human behavior would need to include both the external actions of the body and the inner life of the mind.

-Educational Implications

Using behaviorist theory in the classroom can be rewarding for both students and teachers. Behavioral change occurs for a reason; students work for things that bring them positive feelings, and for approval from people they admire. They change behaviors to satisfy the desires they have learned to value. They generally avoid behaviors they associate with unpleasantness and develop habitual behaviors from those that are repeated often (Parkay & Hass, 2000). The entire rationale of behavior modification is that most behavior is learned. If behaviors can be learned, then they can also be unlearned or relearned. A behavior that goes unrewarded will be extinguished. Consistently ignoring an undesirable behavior will go far toward eliminating it. When the teacher does not respond angrily, the problem is forced back to its source-the student. Other successful classroom strategies are contracts, consequences, punishment and others that have been described in detail earlier. Behaviorist learning theory is not only important in achieving desired behavior in mainstream education. Special education teachers have classroom behavior modification plans to implement for their students. These plans assure success for these students in and out of school.

2.11. SOCIAL COGNITIVE THEORY PERSPECTIVE OF LEARNING

In broad terms, SCT is a psychologically derived theory that explains how individuals within social systems enact multiple human processes, including the acquisition and adoption of information and knowledge. Its main focus is processes of learning, and the interplay between multiple factors therein. Developed by Bandura from the mid-1970s onwards (Bandura, 1977; 1986; 1988; 1989; 1998; 2000; 2001; 2004; 2009). SCT's roots can be traced to the 1940s and articulations of Social Learning and Imitation Theory (Pálsdóttir, 2013). The main tenet of Social Learning and Imitation Theory is that individuals are prompted to learn in response to various drivers, cues, responses, and rewards, one of which is social motivation. A more recent, and direct, antecedent of SCT is Social Learning Theory (Bandura, 1997). Social Learning Theory explains that people learn through the social processes of observing, imitating, and modelling the behaviors of others.

Bandura (1986) adapted Social Learning Theory as SCT to encompass determinants of learning that are neglected in its predecessor: cognitive elements important to the learning process, such as thought (for example, anticipated outcome expectations) and feelings (for example, anxiety), are also considered. Interactions between social and cognitive factors of learning as determinants of behavior are thus a distinctive feature of SCT (Pálsdóttir, 2013). This is known as 'reciprocal determinism' (Bandura, 1971).

In 1961 and 1963 along with his students and colleagues, Bandura conducted a series of studies known as the Bobo doll experiments to find out why and when children display aggressive behaviors. These studies demonstrated the value of modeling for acquiring novel behaviors. These studies helped Bandura publish his seminal article and book in 1977 that expanded on the idea of how behavior is acquired (Evans & Bandura, 1989), thus social learning theory.

In his article Bandura (1977) claimed that Social Learning Theory shows a direct correlation between a person's perceived self-efficacy and behavioral change. Self-efficacy comes from four sources: "performance accomplishments, vicarious experience, verbal persuasion, and physiological states" Bandura (1977, p. 195). Reciprocal determinism can be seen in everyday observations, such as those made by Bandura and others during their studies of aggression. For example, approximately 75 percent of the time, hostile behavior results in unfriendly responses, whereas friendly acts seldom result in such consequences. With little

effort, it becomes easy to recognize individuals who create negative social climates Bandura, (1973). Thus, while it may still be true that changing environmental contingencies changes behavior, it is also true that changing behavior alters the environmental contingencies. This results in a unique perspective on freedom vs. determinism. Usually we think of determinism as something that eliminates or restricts our freedom.

However, Bandura believed that individuals can intentionally act as agents of change within their environment, thus altering the factors that determine their behavior. In other words, we have the freedom to influence factors which determine our behavior. Given the same environmental constraints, individuals who have many behavioral options and are attempt at regulating their own behavior will experience greater freedom than will individuals whose personal resources are limited. Bandura (1977, p. 203). It is important to note that learning can occur without a change in behavior. According to Ormrod's (2008) general principles of social learning, while a visible change in behavior is the most common proof of learning, it is not absolutely necessary. Social learning theorists say that because people can learn through observation alone, their learning may not necessarily be shown in their performance.

In 1986, Bandura published his second book *Social foundations of thought and action: A social cognitive theory*, which expanded and renamed his original theory. He called the new theory Social Cognitive Theory (SCT). Bandura changed the name social learning theory to social cognitive theory to emphasize the major role cognition plays in encoding and performing behaviors. In this book, Bandura (1986) argued that human behavior is caused by personal, behavioral, and environmental influences.

Social Cognitive Theory (SCT) holds that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences. The theory states that when people observe a model performing a behavior and the consequences of that behavior, they remember the sequence of events and use this information to guide subsequent behaviors. Observing a model can also prompt the viewer to engage in behavior they already learned (Bandura, 1986, 2002).

In other words, people do not learn new behaviors solely by trying them and either succeeding or failing, but rather, the survival of humanity is dependent upon the replication of

the actions of others. Depending on whether people are rewarded or punished for their behavior and the outcome of the behavior, the observer may choose to replicate behavior modeled. Media provides models for a vast array of people in many different environmental settings.

Social Cognitive Theory (SCT) is a learning theory based on the idea that people learn by observing others. These learned behaviors can be central to one's personality. While social psychologists agree that the environment one grows up in contributes to behavior, the individual person (and therefore cognition) is just as important. People learn by observing others, with the environment, behavior, and cognition all as the chief factors in influencing development in a reciprocal triadic relationship. For example, each behavior witnessed can change a person's way of thinking (cognition). Similarly, the environment one is raised in may influence later behaviors, just as a father's mindset (also cognition) determines the environment in which his children are raised. The reciprocal determinism was explained in the schematization of triadic reciprocal causation Bandura, (2002). The schema shows how the reproduction of an observed behavior is influenced by the interaction of the following three determinants:

- Personal: Whether the individual has high or low self-efficacy toward the behavior (i.e. Get the learner to believe in his or her personal abilities to correctly complete a behavior).
- Behavioral: The response an individual receives after they perform a behavior (i.e. Provide chances for the learner to experience successful learning as a result of performing the behavior correctly).
- Environmental: Aspects of the environment or setting that influence the individual's ability to successfully complete a behavior (i.e. Make environmental conditions conducive for improved self-efficacy by providing appropriate support and materials). Bandura (2002).

-Human Agency:

Social Cognitive Theory is proposed in an agentic perspective Bandura, (1986), which suggested that, instead of being just shaped by environments or inner forces, individuals are self-developing, self-regulating, self-reflecting and proactive; ...Social cognitive theory rejects a duality of human agency and a disembodied social structure. Social systems are the

product of human activity, and social systems, in turn, help to organize, guide, and regulate human affairs. However, in the dynamic interplay within the societal rule structures, there is considerable personal variation in the interpretation of, adoption of, enforcement of, circumvention of, and opposition to societal prescriptions and sanctions...freedom is conceived not just passively as the absence of constraints, but also proactively as the exercise of self-influence... (Bandura, 2006, p. 165). Specifically, human agency operates within three modes:

- Individual Agency: A person's own influence on the environment;
 - Proxy Agency: Another person's effort on securing the individual's interests;
 - Collective Agency: A group of people work together to achieve the common benefits. (Pajares, Prestin, Chen, & Nabi, 2009)
- Human agency has four core properties:
- Intentionality: Individuals' active decision on engaging in certain activities;
 - Forethought: Individuals' ability to anticipate the outcome of certain actions;
 - Self-reactiveness: Individuals' ability to construct and regulate appropriate behaviors;
 - Self-reflectiveness: Individuals' ability to reflect and evaluate the soundness of their cognitions and behaviors. (Pajares, Prestin, Chen, & Nabi, 2009)

-Human Capability

Evolving over time, human beings are featured with advanced neural systems, which enable individuals to acquire knowledge and skills by both direct and symbolic terms Bandura, (2002). Four primary capabilities are addressed as important foundations of social cognitive theory: symbolizing capability, self-regulation capability, self-reflective capability, and vicarious capability:

- Symbolizing Capability: People are affected not only by direct experience but also indirect events. Instead of merely learning through laborious trial-and-error process, human beings are able to symbolically perceive events conveyed in messages, construct possible solutions, and evaluate the anticipated outcomes.
- Self-Regulation Capability: Individuals can regulate their own intentions and behaviors by themselves. Self-regulation lies on both negative and positive feedback systems, in which discrepancy reduction and discrepancy production are involved. That is, individuals proactively motivate and guide their actions by setting challenging

goals and then making effort to fulfill them. In doing so, individuals gain skills, resources, self-efficacy and beyond.

- **Self-reflective Capability:** Human beings can evaluate their thoughts and actions by themselves, which is identified as another distinct feature of human beings. By verifying the adequacy and soundness of their thoughts through enactive, various, social, or logical manner, individuals can generate new ideas, adjust their thoughts, and take actions accordingly.
- **Vicarious Capability:** One critical ability human beings featured is to adopt skills and knowledge from information communicated through a wide array of mediums. By vicariously observing others' actions and their consequences, individuals can gain insights into their own activities. Vicarious capability is of great value to human beings' cognitive development in nowadays, in which most of our information encountered in our lives derives from the mass media than trial-and-error process. (Bandura, 2002)

- Criticism of Social Cognitive Theory

One of the main criticisms of the social cognitive theory is that it is not a unified theory. This means that the different aspects of the theory may not be connected. For example, researchers currently cannot find a connection between observational learning and self-efficacy within the social-cognitive perspective. The theory is so broad that not all of its component parts are fully understood and integrated into a single explanation of learning. The findings associated with this theory are still, for the most part, preliminary. The theory is limited in that not all social learning can be directly observed. Because of this, it can be difficult to quantify the effect that social cognition has on development. Finally, this theory tends to ignore maturation throughout the lifespan. Because of this, the understanding of how a child learns through observation and how an adult learns through observation are not differentiated, and factors of development are not included.

-Educational Implications of Social Cognitive Theory

An important assumption of Social Cognitive Theory is that personal determinants, such as self-reflection and self-regulation, do not have to reside unconsciously within individuals. People can consciously change and develop their cognitive functioning. This is important to the proposition that self-efficacy too can be changed, or enhanced. From this

perspective, people are capable of influencing their own motivation and performance according to the model of triadic reciprocity in which personal determinants (such as self-efficacy), environmental conditions (such as treatment conditions), and action (such as practice) are mutually interactive influences. Improving performance, therefore, depends on changing some of these influences.

In teaching and learning, the challenge upfront is to 1) get the learner to believe in his or her personal capabilities to successfully perform a designated task; 2) provide environmental conditions, such as instructional strategies and appropriate technology, that improve the strategies and self-efficacy of the learner; and 3) provide opportunities for the learner to experience successful learning as a result of appropriate action (Self-efficacy Theory). Accordingly, the theory itself has numerous implications in classroom teaching and learning practices.

The behaviorist theory and social cognitive theory are fundamental learning theories in social sciences but these theories do not explain our study. For the purpose of this study, the researcher is going to focus on the ideas of Vygotsky because Vygotsky's theories stresses on the fundamental role of social interaction in the development of cognition Vygotsky, (1978), as he believed strongly that community plays a central role in the process of "making meaning." This is seen in his ZPD (zone of proximal development). Vygotsky also talks of motivation when it makes mention of educators who needs to have ways to engage and motivate learners to activate their minds and help them be excited about education. Constructivism is also based on your own experiences and beliefs, which makes knowledge personal. With this accession our principal theory for this study is Vygotsky's sociocultural theory.

2.12. SOCIOCULTURAL THEORY PERSPECTIVE OF LEARNING

The sociocultural theory of learning and teaching is widely recognized in fields of educational psychology. The focus of this theory is on the role social interaction and culture play in the development of higher-order thinking skills. Vygotsky (1978), a Russian psychologist and the founder of sociocultural theory, believed that human development and learning originate in social and cultural interaction. In other words, the ways people interact with others and the culture in which they live shape their mental abilities.

Origins of sociocultural theory are most closely associated with the work of a Russian psychologist Lev Vygotsky (1896 - 1934). He was a talented scholar with broad interests, an accomplished researcher, and a prolific writer. Vygotsky's goal was "to create a new and comprehensive approach to human psychological processes" (Miller, 2011, p. 168). He was closely familiar with works of his contemporaries such as Pavlov as well as Piaget, Binet, and Freud and often commented on their ideas. His thinking was also influenced by philosophers such as Hegel, Marx, and Engels.

Vygotsky is an educational psychologist well known with his sociocultural theory. Basically, Vygotsky's theory suggests that development depends on interaction with people and the tools that the culture provides to help form their own view of the world. There are three ways a cultural tool can be passed from one individual to another. The first one is imitative learning, where one person tries to imitate or copy another. The second way is by instructed learning which involves remembering the instructions of the teacher and then using these instructions to self-regulate. The final way that cultural tools are passed on to others is through collaborative learning, which involves a group of peers who strive to understand each other and work together to learn a specific skill (Tomasello, Kruger, & Ratner, 1993).

The contribution of Vygotsky's ideas to the understanding of the relation between the social world and cognitive development is discussed. Particular attention is given to the significance of culture, the role of language, and the student's relationship with and development within this social world. In doing so, some similarities and contrasts between other learning theorists, specifically Piaget, are briefly discussed. Vygotsky's views of the integrated and dynamic social nature of learning are described, and the notion of a zone of proximal development, which utilizes such ideas, is introduced. Vygotsky's ideas on cognitive development are shown to lead to student-centered and a co-constructivist basis of learning, in which the student potential within the social context is accommodated.

The sociocultural theory proposed by Vygotsky (1978) explains human cognitive development based on social and cultural development. According to the theory, cognitive development is connected with culture and society. Learners construct new knowledge through social interaction and collaboration with others. They construct their new knowledge with the help of other learners, the learning context and the environment. Thus, learners' cognitive development depends on the tools provided by society. According to Vygotsky, cognitive development is a process through which learners develop more systematic, logical

and rational concepts from their social interactions with the help of a teacher or a peer who is more skilled in the subject. Through the interactions, the learners acquire new knowledge of the world and culture, and strategies for learning.

To further explain the theory, the concept of the zone of proximal development for learning (ZPD) was introduced by Vygotsky (1978). The concept includes two levels of learning based on the theory. The first level is the one already reached by a learner, the actual development level. At this level, a learner is capable of solving a problem independently. The second level is the one yet to be attained by a learner. It is a level of potential development (ZPD) where a learner is capable of reaching with the help of a teacher or more capable peer. Thus, ZPD is described as the range of tasks that are too difficult for a learner to master alone but with the guidance and assistance of a teacher or a more capable peer. The assistance is provided to help the learners to get into their zone of proximal development for learning (ZPD).

Several investigators, such as Piaget (1959), Vygotsky (1978), Bandura (1977), Rogoff (1990), and Wood (1998), have considered the relationship between the social world and cognitive development. A commonality of the various theories is that student learning is not viewed as a simple process of information transfer from a source (teacher, parent, computer), but often involves an active social interaction in which, for example, a student constructs knowledge through discovery and experiment Piaget (1959), learns through imitation or observation Bandura (1977), or relies upon teacher support which is congruent with the student's immediate (proximal) potential for learning Vygotsky (1978).

The work of Vygotsky gives particular attention to the inter-relationships between macro-social (i.e. cultural-historical) and micro-social (i.e. interpersonal) influences on cognitive development, and thus social influences on learning in a broad sense. External social forces are viewed as important in the learner's development, in which the learner is considered an apprentice Rogoff, (1990) requiring the guidance, facilitation and support of teachers. This view is often contrasted with that of Piaget's theory, in which the main forces driving cognitive development of a student are seen as within the individual (i.e. the student as a scientist), constrained to some extent by developmental stages (Lefrancois, 1999).

Vygotsky defined the social world by considering not only the interpersonal interactions between, say, a student and teacher, or student and peer, but also the broader

sociocultural and historical influences on learning and the learning environment. The underlying themes of Vygotsky's theory on cognitive development have thus often been summarized as: (i) the significance of culture, (ii) the role of a principal proponent of culture: language, and (iii) the student's relationship with and development within this sociocultural world. In this context, culture is viewed as socially accepted behaviors, attitudes, and beliefs, and is constructed through human societal products such as institutions, symbol systems, and tools such as language. Culture in this sense is a dynamic outcome of historical events and developments, and thus products of human development.

However, as emphasized by Vygotsky, at any particular historical time, culture itself will influence human mental functioning and behavior, and thus a complex integrated relationship between the cultural environment and personal development. In other words, humans are not only producing culture, but are also products of culture themselves. The cultural influences on childhood development can be exemplified through the elementary and higher mental notions of Vygotsky.

The former describes innate functions or characteristics of a young child such as responding to a mother's voice and crying for a need. In the course of development, perhaps through operant conditioning, imitation, perception or some limited cognitive evaluation, elementary functions are gradually transformed into higher mental functions such as problem solving, logic, and propositional and hypothetical thinking. Vygotsky believed that this transformation is strongly influenced by culture. For example, culture results in language and other symbolism which perhaps define non-primitive consciousness and create the social processes and pressures (motives) for adopting the patterns of behavior and attitudes which are characteristic of that culture.

Vygotsky believed that thought is possible by language and is thus the basis of consciousness. According to his view without language human development could not exceed that of primitive sense and perception functions, characteristic of lower forms of mammalian life. Language was also seen as the tool of culture which enables social interaction, and thus the direction of behavior and attitudes, and indeed the propagation and development of culture itself. The specific and early relationship of language and cognition can be identified through three key stages in the development of speech: social, egocentric, and inner speech (Vygotsky, 1986).

Social or external speech dominates the first stage of language development, and is a means by which young children (typically up to the age of 3) express emotions or simple thoughts. The speech is principally used for control of behavior of others, but also acts as a means of conveying early social influences such as parental tolerances of behavior. Such influences inevitably lead to the restructuring of thoughts, and thus cognition. Egocentric speech occurs between the ages of 3 and 7 and describes an intermediate stage of language development between external speech and inner thoughts (see below).

In this stage, the child will often talk to him or herself in an effort to control their own behavior or justify actions or approaches to a task. With maturity, egocentric speech becomes inner speech (self-talk), which has also been referred to as the stream of consciousness by James (1890). Vygotsky believed that inner speech enables individuals to direct and organize thought, and thus an important proponent of higher mental functioning. Hence, the set of arbitrary and conventional symbols which are used to convey meaning, but which are culturally determined in form and interpretation, become a part of the individual's cognitive being.

Closely related to the formation of inner speech is the concept of internalization. This involves the internal acceptance (perhaps with individual modification or interpretation) of social (external) values, beliefs, attitudes or standards, as one's own. In this sense, the psychological make-up of the individual is altered through internalization, and provides a dynamic mechanism by which the inter-social becomes the intra-social. However, such a mental adoption processes should not be confused with processes such as introjection or socialization. The former describes internalization in which there is little active participation by the individual; c.f. operant learning, and indeed some forms of hypnosis. In contrast, socialization describes a pseudo-internalization process in which apparent beliefs arise from a need to conform to society rather than any actual commitment. Internalization as viewed by Vygotsky therefore, represents a genuine, participative, and constructed process, but nevertheless determined by sociocultural influences.

As indicated above, the outcome of internalization is that interpersonal or personal-cultural influences, become transformed into intrapersonal characteristics. Thus, every function in the child's cognitive development, such as attention, logic or concept formation, appears twice: first on the social level and then on the individual level (Vygotsky, 1978). An important implication of the above ideas is that there is much opportunity through the school

system to influence the cognitive development of children. For example, through language, the presentation and interpretation of history and current affairs, and the attitudes, beliefs and values of teachers (or significant others), the thought patterns and beliefs of students may be shaped. Unlike Piaget, who believed that children construct their own ideas of the world, Vygotsky's ideas suggest that student-teacher and student-peer relationships are of prime importance of generating and facilitating new ideas, perspectives, and cognitive strategies.

Furthermore, the student apprentice can be seen to be active within their learning environments, attempting to construct understanding where possible, and possibly contribute to or affirm with the adopted culture. In turn, this aspect of human development inevitably has influence on the environment itself, and thus a dialectic process in which learning and development is affected by the social world, and the social world changed through learning and development (Tudge & Winterhoff, 1993). In a similar way, Vygotsky has argued that natural (biological) and cultural development coincide and merge to form a dynamic and integrated sociobiological influence on personality (Vygotsky, 1986).

A second important implication of Vygotsky's views is that rather than deriving explanations of a student's psychological activity (e.g. intelligence and motivation) from the student's characteristics, attention should be given to student behavior and performance when engaged in a social situation. Vygotsky in specific postulated the notion of a zone of proximal development (ZPD) which defines the difference between the child's independent learning accomplishments, and accomplishments under the guidance of a person who is more competent at the specific task at hand. Vygotsky particularly viewed adults, rather than peers, as key in this relationship, perhaps because adults are more likely to be truly competent in the task, and thus less likely to cause regression rather than progression in the collaboration (Tudge & Winterhoff, 1993).

The maximization of potential was then viewed as a social process, which challenges the traditional notions of intelligence testing with psychometric tests. For example, emphasis is given to the potential of the student and its social contextualization, rather than current cognitive abilities measured independent of a social context. However, this notion of potential does not necessarily imply an intelligence level, since the ZPD is a dynamic assessment which may be complicated through the various student-specific influences of the social learning environment.

Past experiences (prior knowledge), personality attributes, locus of control, and self-esteem for example, may all have possible influences on the efficacy of learning through the social interaction. Likewise, as a further complexity, the ZPD is not a well-defined space, but created in the course of the social interaction (Tudge & Winterhoff, 1993). Nevertheless, the notion of the ZPD gives importance to the student-centered basis of education, and suggests that the individual progression towards an overall learning outcome will be dictated by the guided and subjective accomplishments of intermediate (proximal) outcomes.

Although the social influences on cognitive development have been considered by other researchers, such as Piaget and Bandura, Vygotsky emphasized that individual development is inherently integrated with cultural, historical, and inter-personal factors. Furthermore, Vygotsky viewed the individual in the social context as the unit of analysis in development, rather than the sole individual. In other words, whilst the internalization of thoughts, attitudes, and beliefs have been widely accepted to be socially influenced, further higher mental development is postulated by Vygotsky to be inseparably dependent upon social interactions, and indeed new understanding is not necessarily viewed as an external feature to be adopted by the student, but something which is created in the process of the social (teaching) interactions (Tudge & Winterhoff, 1993).

The socio-cultural theory of Lev Vygotsky (1978) as mentioned in Pananaki (2015) is focused on the interaction of learners during language learning processes. It is seen as a theory that improves the cognitive skills of language learners and fluency. The central focus of the socio-cultural theory is the ZPD (zone of proximal development), a moment where the language learner needs assistance from a more competent person who guides the learner in the process of scaffolding until the learner is exposed to independent capabilities of learning (McLeod, 2018).

In relation to bilingual education, instructing a language learner who is limited in proficiency but needs assistance and collaborative efforts from an expert, instructor or more competent person will improve the learner's cognitive abilities and facilitate learning the language. Secondly, bilingual education fosters cultural development through social interactions and activities and learners who are bilinguals have other greater opportunities to interact with the world around them. Speaking more than one language improves cognitive development in language learning. Bilingual learners who acquire language competence in both L1 and L2 promote cognitive development in language learning.

-Criticisms of Sociocultural Theory

The writings of Vygotsky have been widely-criticized both during his lifetime and after his death. Vygotsky did not do empirical work to validate his findings instead relying on observation and testing. Social interaction is central to Vygotsky. However, he did not say what types of social interaction are best for learning. One criticism is Vygotsky's view of active construction of knowledge. Some critics suggest that learning is not always a result of active construction. Rather, learning can occur passively or osmotically. Some children, regardless of how much help is given by others, may still develop at a slower rate cognitively. This suggests that there are other factors involved such as genetics.

Vygotsky's theories rely a lot on cultural influences, for it is culture that helps to develop learners' language acquisition and cognitive development. Vygotsky states that little language acquisition and cognitive development come from biological factors. However, some psychologists dismiss the idea that cultural influences play a dominant role in development of language. Some children take years to learn basic skills despite plenty of social support. In some cases, children are unable to grasp certain concepts until they reach a level of maturity. This lends credence to Piaget's view of cognitive development occurring in stages and children not being unable to learn some concepts until they reach a certain age.

Another criticism of Vygotsky's work concerns the assumption that it is relevant to all cultures. Rogoff (1990) dismisses the idea that Vygotsky's ideas are culturally universal and instead states the concept of scaffolding-which is heavily dependent on verbal instruction-may not be equally useful in all cultures for all types of learning. Indeed, in some instances, observation and practice may be more effective ways of learning certain skills. Vygotsky was also criticized for the concept of the "zone of proximal development," referred to as "one of the most used and least understood constructs to appear in contemporary educational literature".

The researcher in this chapter has examined three theories in relation to the problem of the study and also the various variables on which the study is based. These theories are; behaviorist theory of learning, social cognitive theory and sociocultural theory of learning,

CHAPTER 3: RESEARCH METHODOLOGY

This chapter presents the methodology employed during the study, it deals with the research method used in gathering data. The areas of the study and reasons which underpin the choice of area are explained. It treats the research design and approach, the population, sample and sampling techniques, data collection methods used during data collection are provided, which includes the following: research instrument and administration, data analysis technique. The hypotheses and variables of the study are equally seen.

3.1. TYPE OF RESEARCH

This research used a quantitative research method of survey, using a scale as a data collection tool. (Bryman, 2001, p20) argue that quantitative research approach is the research that places emphasis on numbers and figures in the collection and analysis of data. Quantitative research involves the collection of numerical data in order to explain, predict, and control phenomenon of interest, data analysis being mainly statistical. It involves collecting data in order to test hypothesis or answer questions concerning the current status of the subject of the study. It is applied in order to describe current conditions or to investigate relationships, including cause and effect relationship.

3.2. RESEARCH DESIGN

Research design according to Polit, Hungler, & Beck, (2001) is “the overall plan for collecting and analyzing data including specifications for enhancing the internal and external validity of the study.” Burns and Grove (2009) describes a research design as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings”.

In this study, we coin our definition of research design based on the definitions above. According to the researcher, research design is simply the method used by the researcher to collect and analyze data that are needed to test research hypotheses. In this study, the research design adopted by the researcher to collect and analyze data is the survey research design.

The reason why the researcher used a survey research approach is that, it makes use of statistical data as a tool for saving time and resources. The use of statistical data for the research descriptions and analysis saves time as data is collected in a relatively short period of

time. Also, the use of scientific methods for data collection and analysis make generalization possible with this approach.

3.3 AREA OF STUDY

This study is conducted in the University of Yaoundé I, located in the Cameroon capital of Yaoundé. The University of Yaoundé I is a public university offering degree programs in both French and English. The university of Yaoundé I was chosen because it is a bilingual university and thus adaptive to the study.

Geographically, university of Yaoundé I, precisely in Yaoundé III is situated in the central region of Cameroon and it is the political and administrative capital of Cameroon. It is made up of seven sub divisions that is, Yaoundé 1,2,3,4,5,6, and 7. Yaoundé is situated in the southern part of the county between latitude 3° , 47° , and 3° , 56° in the North, and longitude 11° and 10° and 14° , 45° East of the country after Douala. It is the second largest town in Cameroon after Douala in terms of population.

As to what concerns university of Yaoundé I, it has 03 campuses (Ngoa-Ekelle, District of Municipal Lake and Nkolbisson). It covers a total surface of 105.37 hectares. It has 05 faculties/schools, 04 specialized centers, 02 virtual universities and 65 laboratories of research.

3.4. POPULATION OF STUDY

According to Amin (2000), the term population refers “to the complete collection (or universe) of all the elements (units) we are interested in a particular investigation”. He also defined a population as “the aggregate or totality of objects or individuals, having one or more characteristics in common that are of interest to the researcher and where inferences are to be made in as sampling study.

The study population comprised students of the faculty of education the university of Yaoundé I, academic year 2021-2022. The reason behind choosing these participants stemmed from the fact that, they were all living in Cameroon as students and as such, where readily available for research purpose.

➤ Targeted Population

According to Creswell (2012), a targeted population is the group of individuals with some common defining characters that the researcher can identify and study. According to this research, targeted population is the population to which the researcher alternately wants to generalize the results. It is sometimes called the parent population. The targeted population from whom the researcher carried this research is students of the departments of CEV and EFE.

➤ **Accessible Population**

The accessible population is the population from which the researcher is able to make use of in his study. In the case of this study, the accessible population drawn from the targeted population is master II students of the department of CEV and EFE. This is because the researcher wants to understand how they have evolved from master I to master II. These departments have a population of 249 students

3.5. SAMPLE

Amin (2000 p.13) defines a sample as “a representative collection of some elements of a population”. He also defined it as “the portion of the population whose results can be generalized to the entire population”. In our own understanding, sample is the group of people that represents the whole population and whose results can be generalized to the entire population.

Sampling therefore, is the process of extracting a portion of the population from which generalization to the population can be made. It can also be the process of selecting elements from the population in such a way that the sample elements selected represents the population. As to what concerns the sample, given a population of 249, a minimum sample of 152 was determined by consulting Krejcie and Morgan (1970). This is because they have the characteristics of subjects needed for the study and their response will help to attend fixed objectives.

3.6. SAMPLING TECHNIQUE

A sampling technique is a plan which specifies how elements should be drawn from the population. The sampling technique used to select the participants of this study is purposive sampling. Purposive sampling plan was used to select two departments out of the five departments of the faculty of education. A sampling plan that was used to make valid

generalization to other population. This group was most suitable for the research study at hand because they were directly accessible. The sample was equally suitable for the independent variable examined in this study.

Purposive sampling was used to select the master II students from the sample departments. The master II students were selected because they already have sufficient knowledge about bilingualism given that they have acquired bilingual education program from primary, secondary, and university levels. It is also because of their maturity and bilingual educational experience.

3.7. RESEARCH INSTRUMENTS

Research instruments are the various tools used by the researcher to collect information from respondents. The main research instruments used for this study were questionnaire. According to Nworgu (1991), the questionnaire is by far most frequently used instrument in educational research. In this research, a set of questionnaires were designated by the researcher in collaboration with his supervisor. The questionnaires were constructed in conformity with the independent and dependent variables and their indicators, research question, research hypothesis, and literature review. All the questions were closed ended. The questionnaires were scaled in line with five points Likert scale, which was used to collect data pertaining to learning strategies and students' bilingual achievement, the scale used in the study comprised of 36 items (26 items for learning strategies and 10 items for students' bilingual achievement). Participants were asked to respond using a five-point Likert scale according to their experience (from 1=strongly disagree to 5 = strongly agree). The 36 items were further organized into four main categories: self-motivation, students' interaction, personal effort and students' bilingual achievement.

The reason for choosing a questionnaire with close ended questions was because the researcher wanted to simply have a precise answer from the respondents. Also, questionnaire was used because it was time saving and enabled the researcher to gather much information from a greater number of respondents at a relatively short period of time. The questionnaire was particularly relevant as it helped respondents to maintain some degree of anonymity which was believed to have increased the level of their objectivity. Questionnaire was equally used because students learning strategies cannot be directly observed or manipulated. Questionnaires were also preferred to take care of confidentiality.

3.8. VALIDATION AND RELIABILITY OF THE RESEARCH INSTRUMENT

According to Drost, (2011) “The extent to which a measure adequately represents the underlying construct that it is supposed to measure” is called validity. Validity is the trying to explain the truth of research findings as explained by Zohrabi, (2013). In this study, the measurement was subject to face and content validity.

➤ Content Validity

The purpose of validity is to examine the accuracy with which an instrument measures what it intends to measure. To avoid ambiguity and to ensure clarity of questions in order to enable respondents answer with ease, the instruments were validated. The researcher gave the instruments to some persons in the field of education and to her supervisor for cross examination and scrutiny. As a result, some items were dropped out, some rephrased and some retained respectively. After the operationalization of the variables, the researcher identified the indices from where he constructed the instrument. The instrument was then handed to the researcher’s supervisor to examine the validity of the content. This is known as the content validity, which is the extent to which the research questions are related to the variables of study and really measure what they are supposed to measure. According to Bollen (1989), as cited in Drost (2011) content validity is a qualitative type of validity where the domain of the concept is made clear and the analyst judges whether the measures fully represent the domain (p.185).

➤ Reliability of Research Instrument

Reliability According to Drost, (2011), is “the extent to which measurements are repeatable when different people perform the measurement on different occasion, under different condition, supposedly with alternative instruments which measure the construct or skill”. It can also be defined as the degree to which the measure of a construct is consistent or dependable. To establish the reliability of instrument, the researcher used test and retest reliability. It is a measure of consistency between measurements of the same construct administered to the same sample at two different points in time Drost, (2011).

The researcher used test- retest reliability type to establish the reliability of the instrument. Questionnaire was first administered to 30 participants who were randomly selected from the study population. She re-administered the questionnaire again to them after

two weeks. The score of the two questionnaires were computed to obtain a coefficient of stability, it was significant and high indicating that the instrument had good test- retest reliability. The two weeks lapse for the second set of questionnaire to be administered was simply to avoid a situation where the respondents could easily recall their former responses, and also due to the fact that when the time interval is too long, the responses might differ due to maturation, new experiences and intervening learning.

3.9. ADMINISTRATION OF RESEARCH INSTRUMENT

The questionnaire was personally administered by the researcher to master II students of CEV and EFE. After taking a research letter of authorization from the head of department of the Faculty of Education, University of Yaoundé I authorizing the researcher to carry out research. While in the field, subjects concerned were given questionnaires to fill, instructions in the questionnaire were properly explained to the students and they were permitted to ask questions for clarification. The return rate was only known after the researcher went down to the field to administer questionnaires.

Table 1: **Source publication. Return Rate of Questionnaire by Respondents**

Response	Total
Number of items	152
Number administered	152
Number returned	110
response rate in %	72.37%

In the present study, all of the 152 items was administered of which the researcher has successfully collected a total number of 110. Giving a response rate of 72.37%

3.10. DATA ANALYSIS TECHNIQUE

Descriptive statistics, Pearson correlation and simple linear regression methods will be employed to analyze the collected data from SPSS 26.0. It will be interpreting to come at conclusion and implications. The hypotheses will be tested using the t-test at 0.05 level of significance. Correlation is a method for examining the relationship between the quantitative variables. In this study, Pearson Correlation Analysis is used to measure the association or strength of the relationship between the variables, namely self-motivation, student interaction and personal effort and dependent variable students' bilingual achievement. Regression is

used in order to test the influence of the independent variables on the dependent variable. Linear regression is a statistical tool that was used because it is the procedure that uses two or more independent variables to predict a dependent variable.

The Pearson correlation is the most commonly used index for correlations. This index measures the degree and direction of relationship between two variables X and Y. The X and Y are the two random variables that satisfy the three conditions for the Pearson correlation.

-The raw score formula

$$r_{xy} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

n= number of paired observations

$\sum xy$ =sum of cross product of X and Y. this is multiplied the corresponding values of X and Y and the sum of these products.

$\sum X$ and $\sum Y$ are the sums of X and Y score responsibly.

$\sum X^2$ = sum of all squared values of the X scores.

$\sum Y^2$ =sum of all squared values of the Y scores.

$(\sum X)^2$ = sum of all X scores, this sum squared

$(\sum Y)^2$ = sum of all Y scores, this sum squared

Note that $\sum XY \neq (\sum X)(\sum Y)$, $\sum X^2 \neq (\sum X)^2$, and $\sum Y^2 \neq (\sum Y)^2$.

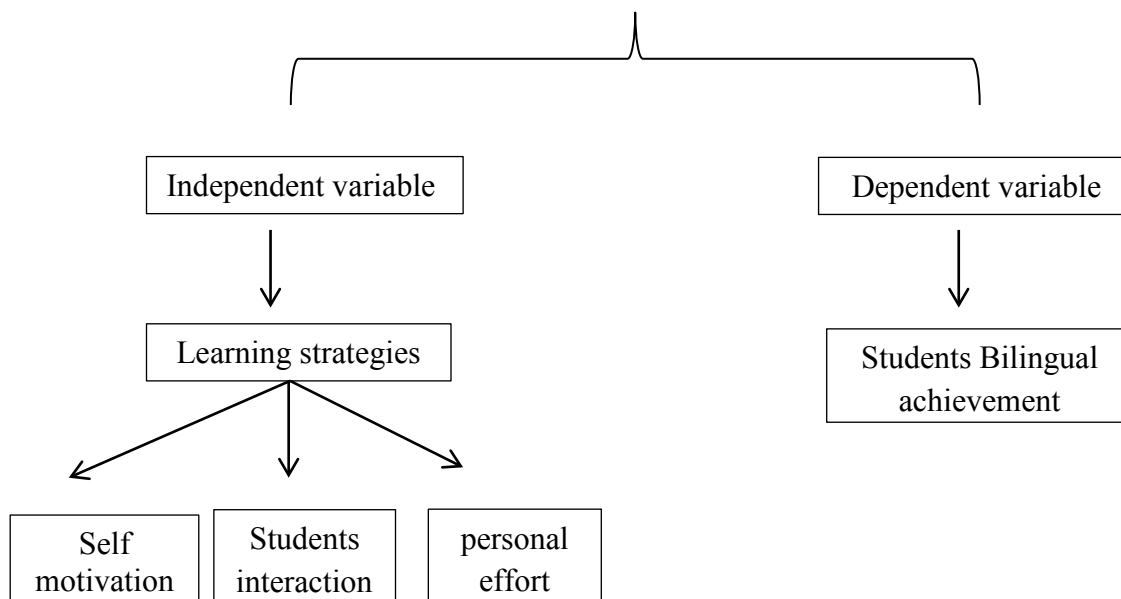
After calculating the index of a correlation, we interpret the value of r_{xy} as: The correlation r_{xy} ranges from -1 to +1 that is r_{xy} lies in the interval -1 to 1. A calculated value outside this range implies an error has been made. $r_{xy} = -1$ and 1 describes a perfect negative and positive linear correlation respectively. An $r_{xy} = 0$ which implies lack of a linear correlation between X and Y.

3.11. VARIABLES OF STUDY

Variable is a quality which can take a member of different values or state Brown, and Dowling, (1998 p. 22). Commonly there are two kinds of variable, independent variable and

dependent variable. The major variable employed in this study are the independent and dependent variables

Figure 1: source researchgate.net. The Type of Variables



➤ **Dependent variable**

The dependent variable is also known as the criterion variable. It's the effect of independent variable. In our study the dependent variable is “students’ bilingual achievement” which we measure in terms of performance.

➤ **Independent variables**

An independent variable on the other hand is also known as the predictor variable or explanatory variables. It is the one that influences the dependent variable and it is the presumed cause of the variation in the dependent variable. It explains or accounts for variation(s) in the dependent variables. In this study the independent variable is “learning strategies”.

Table 2: Source; researchgate.net. Recapitulative Table of Variables and Their Indicators

Hypotheses	Independent variables	Indicators	Dependent variable	Modality	Measuring scale	Statistical test
H1: There is a relationship between self-motivation and bilingual achievement	Self-motivation	-Remind yourself of long term goal -Develop interest -Develop love and desire -Be encouraged -Reward yourself -Know yourself	Students bilingual achievement	-Strongly agree -Agree -Neutral -Disagree -Strongly disagree	Ordinal	Pearson correlation and regression
H2: there is a relationship between students interaction and students bilingual achievement	Students interaction	-Associate with classmates -Study with friends -Become more involved with friends -Engage with friends	Students bilingual achievement	-Strongly agree -Agree -Neutral -Disagree -Strongly disagree	Ordinal	Pearson correlation and regression
H3: there is a relationship between personal effort and students bilingual achievement	Personal effort	-Always present at lectures -Attentive in class -Engage in class activities -Ask questions -Attend school regularly -Use translated version of dictionary. -Seek for help from friend	Students bilingual achievement	-Strongly agree -Agree -Neutral -Disagree -Strongly disagree	Ordinal	Pearson correlation and regression

This chapter examined the research methodology which is the step by step procedure on how the research was conducted. This chapter is very instrumental in research because it paves the way for the next chapter which focuses on presentation of results and data analyses in relation to the indicators of the independent variable which are; motivation, student's interaction and personal effort.

CHAPTER 4: PRESENTATION OF RESULTS AND ANALYSIS OF DATA

The fifth chapter of our research has to do with information gotten from the field, results of the data that were collected with the use of questionnaires are presented in this chapter. This data involves descriptive statistics, correlations and regression. The data collected was analyzed with the use of Pearson correlation and regression. This data enables the researcher to determine the relationship between variables and to know how variable influence each other. We shall start by analysis of the background data then, move to verification of hypothesis.

4.1 DESCRIPTIVE STATISTICS

Data collected from the field was presented according to the various modalities and the frequency of occurrence, including their percentages. The presentation was followed by different charts and literature about the percentages was given.

Table 3: Frequency Distribution According to Sex

Gender	Frequency	Percentage
Male	51	46.4
Female	59	53.6

Figure 2: Frequency distribution according to sex

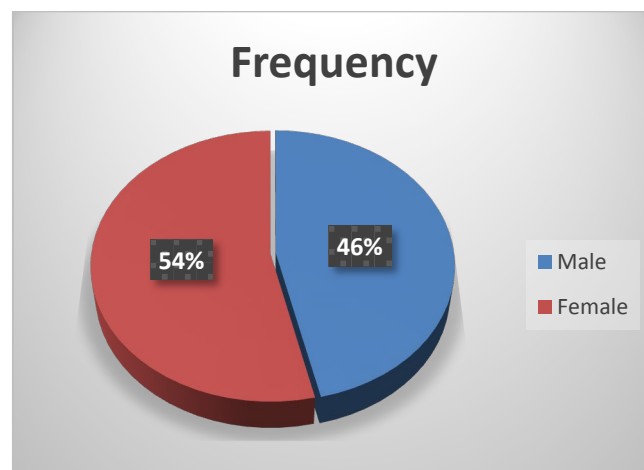
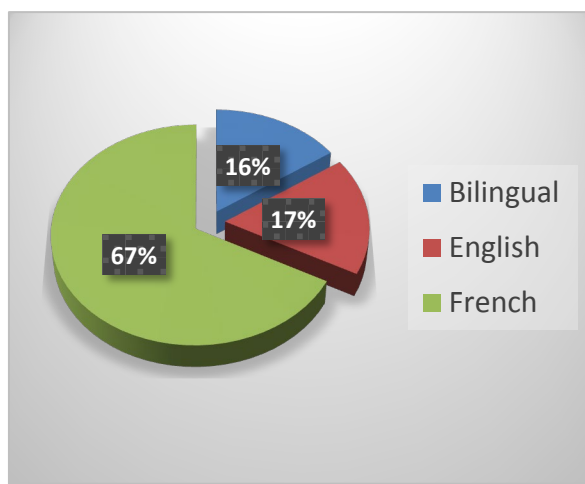


Table 1 and the pie charts above shows the frequency distribution according to gender, 51 male students scoring a percentage of 46.4 and 59 female students scoring a percentage of 53.6. following the table above, the gap between the male and female is a little wide. This may be explained by the fact that women have realized that their place is not in the kitchen as was the mistake before

Figure 3: Frequency distribution according to language.



The above pie chart shows the frequency distribution according to language, 16% of students are bilingual, 17% of students are English speakers and 67% of students are French speakers. Following the pie chart distribution, the gap between the French and English speakers is too wide. This may be explained by the fact that, university of Yaoundé 1 is located in the center region of Cameroon given that it is a francophone region and most accessible to the French majority students compared to the English minority students.

4.2 PRESENTATION OF FREQUENCY DISTRIBUTION ON INDEPENDENT AND DEPENDENT VARIABLE

Table 4: Frequency distribution according to self-motivation

Items	SA		A		N		D		SD		Mean	SD
	F	%	F	%	F	%	F	%	F	%		
I get motivation from myself to achieve bilingual learning objectives	48	43.6	56	50.9	5	4.5	1	0.9	0	0	4.37	0.62
I get inspired from other people, parents, friends, academic staff to study in English and French	45	40.9	55	50.0	9	8.2	1	0.9	0	0	4.31	0.66
I am encouraged from success in specific courses to be bilingual	22	20.0	75	68.2	11	10.0	1	0.9	1	0.9	4.06	0.65
I am encouraged from good marks on assignments and projects to study bilingual education	30	27.3	69	62.7	10	9.1	1	0.9	0	0	4.16	0.61
I get motivation from studying for perfect bilingualism	37	33.6	68	61.8	4	3.6	1	0.9	0	0	4.28	0.58
The love for particular subjects pushes me to learn in French and English	26	23.6	75	68.2	8	7.3	1	0.9	0	0	4.15	0.57
Specific topics moves me to study in French and English	32	29.1	72	65.5	5	4.5	1	0.9	0	0	4.23	0.57
I am moved from class study group discussion to learn in both languages	32	29.1	67	60.9	10	9.1	1	0.9	0	0	4.18	0.62

From the table above, 43.6% (48) of students strongly agree that they get motivation from themselves to achieve bilingual learning objectives, 50.9% (56) students agree that they get motivation from themselves to achieve bilingual learning objectives, 4.5% (5) students are neutral on being self-motivated to achieve bilingual learning objectives, 0.9 % (1) student disagree that he gets self-motivation to achieve bilingual learning objectives and no student strongly disagrees on self-motivation to achieve bilingual learning objectives. The mean score of self-motivation to achieve bilingual learning objectives is 4.37 and standard deviation is 0.62. This shows that students get motivation from themselves to achieve bilingual learning objectives.

40.9 %, (45) students strongly agree that they get inspired from other people, parents, friends, academic staff to study in English and French, 50.0 % (55) student agree that they get inspired from other people, parents, friends, academic staff to study in English and French, 8.2 % (9) students were neutral, 0.9% (1) student disagree, and no student strongly disagree. The mean score of getting inspired from other people, parents, friends, academic staff to study in English and French is 4.31 and standard deviation is 0.66. This shows that students get inspiration from other people, parents, friends, academic staff to study in English and French

Talking about being encouraged from success in specific courses to be bilingual 20.0 % (22) students strongly agree that they are encouraged from success in specific courses to be bilingual, 68.2 % (75) students agree that they are encouraged from success in specific courses to be bilingual, 10.0 % (11) students are neutral, 0.9% (1) student disagree, and 0.9% (1) student strongly disagree. The mean score for being encouraged from success in specific courses to be bilingual is 4.06 and standard deviation is 0.65. This shows that students are encouraged from success in specific courses to be bilingual.

Moreover, 27.3% (30) students strongly agree that they are encouraged from good marks on assignments and projects to study bilingual education, 62.7% (69) students agree that they are encouraged from good marks on assignments and projects to study bilingual education, 9.1% (10) students were neutral, 0.9% (1) student disagree and no student strongly disagree. The mean score of being encouraged from good marks on assignments and projects to study bilingual education is 4.16 and standard deviation is 0.61. This means that good marks on assignments and projects encourages students to study bilingual education.

33.6% (37) students strongly agree that they are motivated from studying for perfect bilingualism, 61.8 % (68) students agree that they are motivated from studying for perfect bilingualism, 3.6 % (4) students are neutral, 0.9 % (1) student disagree, and no student strongly disagree. The mean score of being motivated from studying for perfect bilingualism is 4.28 while standard deviation is 0.58. Meaning that students get motivation from studying for perfect bilingualism

23.6 % (26) students strongly agree that love for particular subjects pushes them to learn in French and English, 68.2 % (75) agree that love for particular subjects pushes them to learn in French and English, 7.3% (8) students are neutral, 0.9% (1) student disagree, and no student strongly disagree. For the love for particular subjects to push students to learn in French and English the mean score is 4.15 and standard deviation is 0.57. This explains that the love for particular subjects pushes students to learn in French and English.

29.1% (32) students strongly agree that Specific topics moves them to study in French and English, 65.5 % (72) student agree that Specific topics moves them to study in French and English, 4.5 % (5) students are neutral 0.9 % (1) student disagree, and no student strongly disagree. The mean score of Specific topics to move students to study in French and English is 4.23 and the standard deviation is 0.57. Which explains that Specific topics moves students to study in French and English.

29.1% (32) students strongly agree that class study group discussion moves them to learn in both languages, 60.9 % (67) students agree that class study group discussion moves them to learn in both languages, 9.1 % (10) students are neutral, 0.9% (1) student disagree and no student strongly disagree. The mean score of class study group discussion to moves students to learn in both languages is 4.18 and standard deviation is 0.62. This means that class study group discussion moves students to learn in both languages.

From the analysis of table 4 above of the questionnaire in the variable self-motivation, the researcher can conclude that students are motivated to learn which is a good indication of a good student, hence helps them to achieve bilingual education.

Table 5: Frequency distribution according to student interaction

Items	SA		A		N		D		SD		Mean	SD
	F	%	F	%	F	%	F	%	F	%		
I do not have difficulties interacting with classmates to study in either French or English	31	28.2	48	43.6	17	15.5	10	9.1	4	3.6	3.84	1.05
I enjoy interacting with classmates for clarification on course information in English	46	41.8	44	40.0	15	13.6	4	3.6	1	0.9	4.18	0.87
I enjoy interacting with classmates for clarification on course information in French	37	33.6	46	41.8	20	18.2	6	5.5	1	0.9	1.02	0.91
I only interact during group assigned task in French	15	13.6	39	35.5	26	23.6	20	18.2	10	9.1	3.26	1.18
I only interact during group assigned task in English	10	9.1	94	85.5	6	5.5	0	0	0	0	4.04	0.38
I like interacting with classmates for assignment from French lecturer	37	33.6	61	55.5	10	9.1	2	1.8	0	0	4.21	0.68
I like interacting with classmates for assignment from English lecturer	27	24.5	69	62.7	10	9.1	4	3.6	0	0	4.08	0.69
I am not interested at all to interact with classmates because of language barrier	4	3.6	98	89.1	6	5.5	1	0.9	1	0.9	3.94	0.45

Table 5 above shows the frequency distribution according to student interaction towards students' bilingual achievement. 28.2% (31) students strongly agree that they do not have difficulties interacting with classmates to study in either French or English, 43.6% (48) students agree that they do not have difficulties interacting with classmates to study in either French or English, 15.5% (17) students are neutral, 9.1% (10) students disagree that they do not have difficulties interacting with classmates to study in either French or English and 3.6% (4) students strongly disagree that they do not have difficulties interacting with classmates to study in either French or English. the mean score of difficulties interacting with classmates to study in either French or English is 3.84 and standard deviation is 1.05. This shows that students do not have difficulties interacting with classmates to study in either French or English.

41.8% (46) students strongly agree that they enjoy interacting with classmates for clarification on course information in English, 40.0% (44) students agree that they enjoy interacting with classmates for clarification on course information in English, 13.6% (15) students are neutral, 3.6% (4) students disagree that they enjoy interacting with classmates for clarification on course information in English and 0.9% (1) student strongly disagree. The mean score of interacting with classmates for clarification on course information in English is 4.18 and standard deviation is 0.87. This explains that students enjoy interacting with classmates for clarification on course information in English.

33.6% (37) students strongly agree that they enjoy interacting with classmates for clarification on course information in French, 41.8% (46) students agree that they enjoy interacting with classmates for clarification on course information in French, 18.2% (20) students are neutral, 5.5% (6) students disagree that they enjoy interacting with classmates for clarification on course information in French and 0.9% (1) student strongly disagrees. The mean score of interacting with classmates for clarification on course information in French is 1.02 and standard deviation is 0.91. This means that students enjoy interacting with classmates for clarification on course information in French.

13.6% (15) students strongly agree that they only interact during group assigned task in French, 35.5% (39) students agree that they only interact during group assigned task in French, 23.6% (26) students are neutral, 18.2%, (20) students disagree that they only interact during group assigned task in French, and 9.1%. (10) Students strongly disagree that they only interact

during group assigned task in French. The mean score of to only interact during group assigned task in French is 3.26 and standard deviation is 1.18. This shows that students do not interact during group assigned task in French.

9.1% (10) students strongly agree that they only interact during group assigned task in English, 85.5% (94) students agree that they only interact during group assigned task in English, 5.5% (6) students are neutral, no student disagrees that they only interact during group assigned task in English and no student strongly disagree that they only interact during group assigned task in English. The mean score of, to only interact during group assigned task in English is 4.04 and standard deviation is 0.38. Which means that students only interact during group assigned task in English.

33.6% (37) students strongly agree that they like to interact with classmates for assignment from French lecturer, 55.5% (61) students agree that they like to interact with classmates for assignment from French lecturer, 9.1% (10) students are neutral, 1.8% (2) students disagree that they like to interact with classmates for assignment from French lecturer, and no student strongly disagree. The mean score of the like to interact with classmates for assignment from French lecturer is 4.21 and standard deviation is 0.68. This shows that students like to interact with classmates for assignment from French lecturer.

24.5% (27) students strongly agree that they like to interact with classmates for assignment from English lecturer, 62.7% (69) students agree that they like to interact with classmates for assignment from English lecturer, 9.1% (10) students are neutral, 3.6% (4) students disagree that they like to interact with classmates for assignment from English lecturer, and no student strongly disagrees. The mean score of the like to interact with classmates for assignment from English lecturer is 4.08 and the standard deviation is 0.69. Which explains that students like to interact with classmates for assignment from English lecturer.

3.6% (4) students strongly agree that they are not interested at all to interact with classmates because of language barrier, 89.1% (98) students agree that they are not interested at all to interact with classmates because of language barrier, 5.5% (6) students are neutral, 0.9% (1) student disagrees, and 0.9% (1) student strongly disagrees. The mean score of not interested at all to interact with classmates because of language barrier is 3.94 and the standard deviation is

0.45. this shows that students are not interested at all to interact with classmates because of language barrier.

From the analysis of table 5 above of the questionnaire in the variable student's interaction, it shows that majority of students do not interact among themselves to achieve bilingual education.

Table 6: Frequency distribution according to personal effort

Items	SA		A		N		D		SD		Mean	SD
	F	%	F	%	F	%	F	%	F	%		
I attend lectures regularly and I take down note in either French or English	49	44.5	50	45.5	8	7.3	3	2.7	0	0	4.32	0.73
I attend lectures but I do not take down notes in French	10	9.1	93	84.5	5	4.5	1	0.9	1	0.9	4.00	0.51
I attend lectures but I do not take down note in English	10	9.1	90	81.8	8	7.3	2	1.8	0	0	3.98	0.49
I seek for further French course explanation in English	32	29.1	74	67.3	4	3.6	0	0	0	0	4.26	0.51
I seek for further English course explanation in French	42	38.2	60	54.5	6	5.5	2	1.8	0	0	4.29	0.65
I search all the necessary information and materials when studying in both languages	58	52.7	36	32.7	12	10.9	4	3.6	0	0	4.35	0.82
I am always present but, not attentive in class because of language barrier	15	13.6	49	44.5	18	16.4	9	8.2	19	17.3	3.29	1.30
I consult a translated version of a dictionary or encyclopedia when studying in French and English	51	46.4	46	41.8	7	6.4	3	2.7	3	2.7	4.26	0.91
I change the way I study for exams or test in French	19	17.3	49	44.5	23	20.9	11	10.0	8	7.3	3.55	1.11
I change the way I study for exams or text in English	21	19.1	59	53.6	21	19.1	8	7.3	1	0.9	3.83	0.86

Table 6 above shows the frequency distribution according to personal effort towards students' bilingual achievement. 44.5% (49) students strongly agree that they attend lectures regularly and they take down note in either French or English, 45.5% (50) students agree that they attend lectures regularly and they take down note in either French or English, 7.3% (8) students are neutral, 2.7% (3) students disagree that they attend lectures regularly and they take down note in either French or English, no student strongly disagree. The mean score of to attend lectures regularly and take down note in either French or English is 4.32 and standard deviation is 0.73. This shows that students attend lectures regularly and they take down note in either French or English.

9.1% (10) students strongly agree that they attend lectures but they do not take down note in French, 84.5% (93) students agree that they attend lectures but they do not take down note in French, 4.5% (5) students are neutral, 0.9% (1) student disagree, and 0.9% (1) student strongly disagree. The mean score of to attend lectures but not take down note in French is 4.00 and standard deviation is 0.51. This shows that students make an effort to attend lectures but they do not take down note in French.

9.1% (10) students strongly agree that they attend lectures but they do not take down note in English, 81.8 % (90) student agree that they attend lectures but they do not take down note in English, 7.3% (8) students are neutral, 1.8% (2) students disagree that they attend lectures but they do not take down note in English, and no student strongly disagree. The mean score of to attend lectures not take down note in English is 3.98 and standard deviation is 0.49. This means that students make an effort to attend lectures but they do not take down note in English.

29.1% (32) students strongly agree that they seek for further French course explanation in English, 67.3% (74) students agree that they seek for further French course explanation in English, 3.6% (4) students are neutral, no student disagree and no student strongly disagree. To seek for further French course explanation in English, our mean score is 4.26 and standard deviation is 0.51. This testifies that students seek for further French course explanation in English.

38.2% (42) students strongly agree that they seek for further English course explanation in French, 54.5% (60) students agree that they seek for further English course explanation in

French, 5.5% (6) students are neutral, 1.8% (2) students disagree, and no student strongly disagree. To seek for further English course explanation in French, the mean is 4.29 and the standard deviation is 0.65. This testifies that students seek for further English course explanation in French.

52.7% (58) students strongly agree that they search all the necessary information and materials when studying in both languages, 32.7% (36) agree that they search all the necessary information and materials when studying in both languages, 10.9% (12) students are neutral, 3.6% (4) students disagree scoring, and no student disagreed. To search all the necessary information and materials when studying in both languages, the mean is 4.35 and the standard deviation is 0.82. This shows that students search all the necessary information and materials when studying in both languages.

13.6% (15) students strongly agree that they are always present but, not attentive in class because of language barrier, 44.5% (49) students agree that they are always present but, not attentive in class because of language barrier, 16.4% (18) students are neutral, 8.2% (9) students disagree that they are always present but, not attentive in class because of language barrier, and 17.3% (19) students strongly disagree that they are always present but, not attentive in class because of language barrier. To be always present but, not attentive in class because of language barrier has as mean score 3.29 and the standard deviation is 1.30. Meaning that at least students are always present though they are not attentive in class because of language barrier.

46.4% (51) students strongly agree that they consult a translated version of a dictionary or encyclopedia when studying in French and English, 41.8% (46) students agree that they consult a translated version of a dictionary or encyclopedia when studying in French and English, 6.4% (7) students are neutral, 2.7% (3) students disagree, and 2.7% (3) students strongly disagree. The mean score to consult a translated version of a dictionary or encyclopedia when studying in French and English is 4.26 and the standard deviation is 0.91. This means that students consult a translated version of a dictionary or encyclopedia when studying in French and English

17.3% (19) students strongly agree that they change the way they study for exams or test in French, 44.5% (49) students agree that they change the way they study for exams or test in

French, 20.9% (23) students are neutral, 10.0% (11) students disagree that they change the way they study for exams or test in French, and 7.3% (8) students strongly disagree that they change the way they study for exams or test in French. The mean score of to change the way to study for exams or test in French is 3.55 and the standard deviation is 1.11 this shows that students change the way they study for exams or test in French.

19.1% (21) students strongly agree that they change the way they study for exams or text in English, 53.6% (59) students agree that they change the way they study for exams or text in English, 19.1% (21) students are neutral, 7.3% (8) students disagree that they change the way they study for exams or text in English, and 0.9% (1) student strongly disagree. The mean is 3.83 and the standard deviation is 0.86 this shows that students change the way they study for exams or text in English.

From the analysis of table 6 above of the questionnaire in the variable personal effort, it shows that most of the students put in personal efforts to achieve bilingual education which is a good indication of a determined student.

Table 7: Frequency distribution according to students' bilingual achievement

Items	SA		A		N		D		SD		Mean	SD
	F	%	F	%	F	%	F	%	F	%		
I learn and understand lectures in both French and English	27	24.5	57	51.8	20	18.2	5	4.5	1	0.9	3.95	0.83
I only understand lectures in French	22	20.0	68	61.8	11	10.0	6	5.5	3	2.7	3.91	0.87
I only understand lectures in English	9	8.2	77	70.0	16	14.5	6	5.5	2	1.8	3.77	0.75
I have a complete course mastery in both languages	9	8.2	70	63.6	26	23.6	5	4.5	0	0	3.76	0.67
I have a good course mastery in French than in English	9	8.2	78	70.9	20	18.2	3	2.7	0	0	3.85	0.59
I have a good course mastery in English than in French	13	11.8	69	62.7	20	18.2	7	6.4	1	0.9	3.78	0.77
I perform better in French courses than in English courses	54	49.1	44	40.0	9	8.2	2	1.8	1	0.9	4.34	0.78
I perform better in English courses than in French courses	13	11.8	63	57.3	25	22.7	8	7.3	1	0.9	3.72	0.80
I perform well in both French and English courses	18	16.4	68	61.8	21	19.1	2	1.8	1	0.9	3.91	0.71
I succeed in exams and tests in both English and French	22	20.0	68	61.8	17	15.5	3	2.7	0	0	3.99	0.68

Table 7 above shows the frequency distribution according to students' bilingual achievement. 24.5% (27) students strongly agree that they learn and understand lectures in both French and English, 51.8% (57) students agree that they learn and understand lectures in both French and English, 18.2% (20) students are neutral, 4.5% (5) students disagree, and 0.9% (1) student strongly disagree. The mean score is 3.95 and the standard deviation is 0.83 this shows that students learn and understand lectures in both French and English scoring.

20.0% (22) students strongly agree that they only understand lectures in French, 61.8% (68) students agree that they only understand lectures in French, 10.0% (11) students are neutral, 5.5% (6) students disagree that they only understand lectures in French and 2.7% (3) students strongly disagree. The mean score is 3.91 and the standard deviation is 0.87 this means that students only understand lectures in French.

8.2% (9) students strongly agree that they only understand lectures in English, 70.0% (77) students agree that they only understand lectures in English, 14.5% (16) students are neutral, 5.5% (6) students disagree that they only understand lectures in English and 1.8% (2) students strongly disagree. The mean score is 3.77 and the standard deviation is 0.75 this means that students only understand lectures in English.

8.2% (9) students strongly agree that they have a complete course mastery in both languages, 63.6% (70) students agree that they have a complete course mastery in both languages, 23.6% (26) students are neutral, 4.5% (5) students disagree and no student strongly disagree. The mean score is 3.76 and the standard deviation is 0.67 this means that students have a complete course mastery in both languages.

8.2% (9) students strongly agree that they have a good course mastery in French than in English, 70.9% (78) students agree that they have a good course mastery in French than in English, 18.2% (20) students are neutral, 2.7% (3) students disagree that they have a good course mastery in French than in English. And no student strongly disagrees. We have as mean score 3.85 and standard deviation as 0.59. This shows that students have a good course mastery in French than in English.

11.8% (13) students strongly agree that they have a good course mastery in English than in French, 62.7% (69) students agree that they have a good course mastery in English than in French, 18.2% (20) students are neutral, 6.4% (7) students disagree that they have a good course mastery in English than in French, and 0.9% (1) student strongly disagree. The mean score is 3.78 and the standard deviation is 0.77 this shows that students have a good course mastery in English than in French.

49.1% (54) students strongly agree that they perform better in French courses than in English courses, 40.0% (44) students agree that they perform better in French courses than in English courses, 8.2% (9) students are neutral, 1.8% (2) students disagree, and 0.9% (1) student strongly disagree. The mean score is 4.34 and the standard deviation is 0.78 this implies that students perform better in French courses than in English courses.

11.8% (13) students strongly agree that they perform better in English courses than in French courses, 57.3% (63) students agree that they perform better in English courses than in French courses, 22.7% (25) students are neutral, 7.3% (8) students disagree that they perform better in English courses than in French courses, and 0.9% (1) student strongly disagree. The mean score is 3.72 and the standard deviation is 0.80 which implies that students perform better in English courses than in French courses.

16.4% (18) students strongly agree that they perform well in both French and English courses, 61.8% (68) students agree that they perform well in both French and English courses, 19.1% (21) students are neutral, 1.8 (2) students disagree that they perform well in both French and English courses, and 0.9% (1) student strongly disagree. The mean score is 3.91 and the standard deviation is 0.71 which implies that students perform well in both French and English courses.

20.0% (22) students strongly agree that they succeed in exams and tests in both English and French, 61.8% (68) students agree that they succeed in exams and tests in both English and French, 15.5% (17) students are neutral, 2.7% (3) students disagree, and no student strongly disagree. The mean score is 3.99 and the standard deviation is 0.68 which implies that students succeed in exams and tests in both English and French.

From the analyses of table 7 above of the questionnaire in the dependent variable it shows that most students do not fail in exams.

4.3 VERIFICATION OF HYPOTHESES AND CORRELATIONS

➤ Verification of Hypothesis One

Ho1: There is no relationship between self-motivation and students' bilingual achievement

Ha1: There is a relationship between self-motivation and students' bilingual achievement

Ho1: $P > 0.05$

Ha1: $P \leq 0.05$

To verify this relationship, the hypothesis was tested with Pearson correlation and the following table obtained.

Table 8: Correlations table between self-motivation and students' bilingual achievement

		Self-motivation	Students Bilingual achievement
Self-motivation	Pearson Correlation	1	0.216*
	Sig. (2-tailed)		0.023
	N	110	110
Students Bilingual achievement	Pearson Correlation	0.216*	1
	Sig. (2-tailed)	0.023	
	N	110	110

*Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

The above table presents the following results, the Pearson correlation $r = 0.216$ indicates a positive but weak relationship between self-motivation and students' bilingual achievement. The results further reveals that the relationship between self-motivation and student's bilingual achievement was significant with a P value of 0.023 because the P value is $<$ than 0.05. Therefore, we maintain the alternative hypothesis and reject the null hypothesis. Which means that there is a relationship between self-motivation and students bilingual achievement.

Regression analysis

Table 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.216 ^a	.047	.038	.28756

The Pearson correlation analysis above revealed that there was a weak relationship between self-motivation and students' bilingual achievement. Therefore, the regression analysis went further to establish the influence of the independent variable (self-motivation) over the dependent variable (students' bilingual achievement). The independent variable studied, explains that students' bilingual achievement in the faculty of education of the University of Yaoundé 1 is influence by 4.7% by the independent variable, as represented by the R^2 in the table 9 above. This indicates that self-motivation has a certain influence on students' bilingual achievement and 95.3% of students' bilingual achievement is influence by other factors.

Table 10: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.439	1	.439	5.304	.023 ^b
Residual	8.931	108	.083		
Total	9.369	109			

The analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as **(F (1, 108) =5.304, p value <0.05)**. The p value obtained indicated that self-motivation has a significant influence over students' bilingual achievement. The result above reveals that self-motivation is a strong predictor of students' bilingual achievement because they are linearly related.

Table 11: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.991	.395	.216	7.579	.000
	GlobalSM	.215	.093		2.303	.023

The simple linear regression model indicates that the independent variable (self-motivation) had a positive β coefficient. According to the regression equation established, self-motivation at a constant of zero, students' bilingual achievement will be 2.991. The findings also reveal that every unit increase in self-motivation will lead to a 0.215 increase in students' bilingual achievement. At 5% level of significance and 95% level of confidence self-Motivation had a 0.023 level of significance, which means it has significance influence in students' bilingual achievement.

➤ Verification of Hypothesis Two

Ho2: There is no relationship between students interaction and students bilingual achievement

Ha2: There is a relationship between students interaction and students bilingual achievement

Ho2: $P > 0.05$

Ha2: $P \leq 0.05$

To verify this relationship, the hypothesis was tested with Pearson correlation and the table below obtained.

Table 12: Correlations table between students interaction and students bilingual achievement

		Students interaction	Students Bilingual achievement
Pearson Correlation	Students interaction	1	0.064
	Sig. (2-tailed)		0.507
	N	110	110
Students Bilingual achievement	Pearson Correlation	0.064	1
	Sig. (2-tailed)	0.507	
	N	110	110

*Correlation is significant at the 0.05 level (2-tailed)

** . Correlation is significant at the 0.01 level (2-tailed)

The table above presents the following results; the Pearson correlation $r = 0.064$ indicates a very weak relationship between students interaction and students bilingual achievement. The results further reveals that the relationship between students interaction and students bilingual achievement was not significant with a P value of 0.507 because the P value is $>$ than 0.05. Therefore, we maintain the null hypothesis and reject the alternative hypothesis. Which means that there is no relationship between students interaction and students bilingual achievement.

Table 13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.064 ^a	.004	-.005	.29393

The Pearson correlation analysis above revealed that there was a weak relationship between Students interaction and students' bilingual achievement. The regression analysis was done to establish the influence of the independent variable (Students interaction) over the dependent variable (students' bilingual achievement). The independent variable studied, explain that

students' bilingual achievement in the faculty of education of the University of Yaoundé 1 is influence by 0.4% by the independent variable, as represented by the R^2 of the table 13 above. This indicates that student's interaction has a weak influence on students' bilingual achievement and 99.6% of students' bilingual achievement is influence by other factors.

Table 14: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.038	1	.038	.443	.507 ^b
	Residual	9.331	108	.086		
	Total	9.369	109			

The analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as **(F (1, 108) =0.443, p value >0.05)**. The p value obtained indicated that Students Interaction did not have a significant influence over students' bilingual achievement. The result above reveals that student's interaction is not a strong predictor of students' bilingual achievement because they are not linearly related.

Table 15: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.672	.339		10.829	.000
	GlobalSI	.057	.086	.064	.665	.507

The simple linear regression model indicates that the independent variable (student's interaction) had a positive β coefficient. According to the regression equation established, student's interaction at a constant of zero, students' bilingual achievement will be 3.672. The findings also reveal that every unit increase in students' interaction will lead to a .057 increase in students' bilingual achievement. At 5% level of significance and 95% level of confidence, student's

interaction had a .507 level of significance, which means it did not have a significance influence in students' bilingual achievement.

➤ **Verification of hypothesis three**

Ho3: There is no relationship between personal effort and students' bilingual achievement

Ha3: There is a relationship between personal effort and students' bilingual achievement

Ho3: $P > 0.05$

Ha3: $P \leq 0.05$

To verify this relationship, the hypothesis was tested with Pearson correlation and the table below obtained

Table 16: Correlations table between personal effort and students' bilingual achievement

		Personal effort	Students Bilingual achievement
Personal effort	Pearson Correlation	1	0.324**
	Sig. (2-tailed)		0.001
	N	110	110
Students Bilingual achievement	Pearson Correlation	0.324**	1
	Sig. (2-tailed)	0.001	
	N	110	110

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

The correlation table obtained presents the following results; the Pearson correlation $r = 0.324$ indicates a positive relationship between personal efforts and students' bilingual achievement. The results further reveals that the relationship between personal efforts and students' bilingual achievement was significant with the P value of 0.001 because the P value is < 0.05 . Therefore, we accept the alternative hypothesis and reject the null hypothesis. Which means that there is a relationship between personal effort and students' bilingual achievement.

Table 17: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324 ^a	.105	.097	.27861

The Pearson correlation analysis above revealed that there was a weak relationship between Personal Effort and students' bilingual achievement. The regression analysis went further to establish the influence of the independent variable (Personal Effort) over the dependent variable (students' bilingual achievement). The independent variable studied, explain that students' bilingual achievement in the faculty of education of the University of Yaoundé 1 is influence by 10.5% by the independent variable, as represented by the R^2 in table 17 above. This indicates that Personal Effort has a certain influence on students' bilingual achievement and 89.5% of students' bilingual achievement is influence by other factors.

Table 18: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.986	1	.986	12.703	.001 ^b
	Residual	8.383	108	.078		
	Total	9.369	109			

The analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as $((1,108) = 12.703, p \text{ value} < 0.05$. The p value obtained indicated that Personal Effort has a significant influence over students' bilingual achievement. The result above reveals that the Personal Effort has a strong predictor on students' bilingual achievement because they are linearly related.

Table 19: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.631	.356		7.383	.000
	GlobalPE	.316	.089	.324	3.564	.001

The simple linear regression model indicates that the independent variable (Personal Effort) had a positive β coefficient. According to the regression equation established, Personal Effort at a constant of zero, students' bilingual achievement will be 2.631. The findings also reveal that every unit increase in Personal Effort will lead to a 0.316 increase in students' bilingual achievement. At 5% level of significance and 95% level of confidence Personal Effort had a 0.001 level of significance, which means it has significance influence on students' bilingual achievement.

4.4 IMPLICATION OF THE FINDINGS

The following implications were made based on the findings of the study

Table 20: Implementation of findings of all the variables

Variables	Pearson correlation	R square	Unstandardized Beta values	P. value	Decision
Self-motivation	0.216	0.047	.0215	.0023	Self-motivation has a significant influence on students' bilingual achievement.
Student interaction	0.064	0.004	0.057	0.507	Student interaction has insignificant influence on students' bilingual achievement.
Personal Effort	.324 ^a	.105	.316	0.001	Personal Effort has a significant influence on students' bilingual achievement.

In this chapter, data analysis about the variable under study has been presented. Descriptive statistics, correlation and regression has been carried out in order to test the hypotheses, consequently the following results were obtained. Self-motivation has a significant influence on students' bilingual achievement, student interaction has insignificant influence on students' bilingual achievement, personal effort has a significant influence on students' bilingual achievement. We therefore conclude that self-motivation and personal effort has a significant influence on students' bilingual achievement while student's interaction has insignificant influence on students' bilingual achievement. It is in this light that the next chapter of our research will constitute the interpretation of results, recommendation and conclusion.

CHAPTER 5: INTERPRETATION OF RESULTS AND DISCUSSIONS OF FINDINGS

Previous research has demonstrated that learning strategies influence academic achievement and has shown different aspects of the use of learning strategies by students. The main aim of this study was to build on this previous finding and to further investigate the relationship between learning strategies and students bilingual achievement in the faculty of education of the University of Yaoundé I. Specific objectives were to ascertain the relationship between self-motivation and students bilingual achievement, to find out the relationship between students interaction and students bilingual achievement and to examine the relationship between personal efforts and students bilingual achievement in order to determine students bilingual achievement. Briefly chapter two examined literature established on learning strategies, chapter three presents the research method used in gathering data, chapter four presents information gotten from the field, results and analysis of data.

Chapter five is titled interpretation of results and discussion of findings. In this chapter the researcher has presented the summary of findings, discussion of findings, recommendations, suggestions for further study and conclusion. Data that was collected using questionnaires has been presented with the use of tables and calculated using the Pearson correlation and regression. Also the statistical analysis was used to determine the relationship between variables, the data is simply descriptive in nature. The researcher will deal first with the summary and discussions of findings, secondly the researcher will make recommendations to students, the university, book writers. Suggestions for further research shall be made and finally the main conclusion of this research will be summarized.

5.1. INTERPRETATION OF RESULTS

This study was aimed to investigate the relationship between learning strategies and students' bilingual achievement in the faculty of education of the University of Yaoundé I, as such the following findings were arrived at:

There is a relationship between self-motivation and students' bilingual achievement. Alternative hypothesis one in this study states that there is a relationship between self-motivation and students' bilingual achievement. The researcher used the Pearson correlation and regression

to test and analyze data collected from the field. As concerns the first hypothesis, it was statistically proven that self-motivation significantly influences students' bilingual achievement. The Pearson correlation $r = 0.216$ indicates a positive but weak relationship between self-motivation and students' bilingual achievement. The results further reveals that the relationship between self-motivation and students' bilingual achievement was significant at P value of 0.023 because the P value is $<$ than 0.05. Therefore, we maintain the alternative hypothesis and reject the null hypothesis. Which means that there is a relationship between self-motivation and students bilingual achievement.

There is a relationship between students interaction and students bilingual achievement.

Alternative hypothesis two in this study states that there is a relationship between students interaction and students bilingual achievement. The researcher used the Pearson correlation and regression to test and analyze data collected from the field. As concerns the second hypothesis, it was statistically proven that student's interaction has insignificant influence on students' bilingual achievement. The Pearson correlation $r = 0.064$ indicates a very weak relationship between students interaction and students bilingual achievement. The results further reveals that the relationship between students interaction and students bilingual achievement was not significant at P value of 0.507 because the P value is $>$ than 0.05. Therefore, we maintain the null hypothesis and reject the alternative hypothesis. This means that students' bilingual achievement in school cannot be explained by students interaction, because P value is $>$ than 0.05. Therefore, there is no relationship between students interaction and students bilingual achievement.

There is a relationship between personal effort and students' bilingual achievement.

Hypothesis three in this study states that there is a relationship between personal effort and students' bilingual achievement. The researcher used the Pearson correlation and regression to test and analyze data collected from the field. As concerns the third hypothesis, it was statistically proven that personal effort significantly influences students' bilingual achievement. The Pearson correlation $r = 0.324$ indicates a positive relationship between personal efforts and students' bilingual achievement. The results further reveals that the relationship between personal efforts and students' bilingual achievement was significant at P value of 0.001 because the P value is $<$ than 0.05, this therefore means that we accept the alternative hypothesis and reject the null

hypothesis. Which means that there is a relationship between personal effort and students' bilingual achievement.

5.2 THE APPLICATION OF CONSTRUCTIVIST THEORY OF VYGOTSKY TO THE COMPREHENSION OF STUDENT BILINGUAL ACHIEVEMENT

The constructivist theory of Vygotsky is important to understand students' bilingual achievement. The aspect of Vygotsky's theory that is essential to understanding this study is his zone of proximal development and his idea of social interaction as an aid to learning. The concept of zone of proximal development (ZPD) was developed by Vygotsky (1978) during the late 1920s and elaborated progressively until his death in 1934. In *Mind in Society: The Development of Higher Psychological Processes*, Vygotsky (1978) defined the ZPD as “the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peer.” That is, the ZPD was understood by Vygotsky to describe the current or actual level of development of the learner and the next level attainable through mediating and environmental tools and capable adult or peer facilitation.

Vygotsky consequently focuses much more closely on social interaction as an aid to learning; arguing that, left alone, the learner will develop but not to their full potential. He refers to the gap between actual and potential learning as the Zone of Proximal Development (ZPD) - and argues that it is only through collaboration with adults and other learners that this gap can be bridged.

The zone of proximal development is the gap between what a learner has already mastered (actual level of development) and what he or she can achieve when provided with educational support (potential development). It is the level of a learner's development which displays itself in collaborative activity with an adult but not in the learner's individual activity. The idea is that individuals learn best when working together with others during joint collaboration, and it is through such collaborative endeavors with more skilled persons that learners learn and internalize new concepts, psychological tools, and skills.

Vygotsky's theories stress the fundamental role of social interaction in the development of cognition Vygotsky (1978), as he believed strongly that community plays a central role in the

process of "making meaning." According to Vygotsky (1978), much important learning by the learner occurs through social interaction with a skillful tutor. The tutor may model behaviors and/or provide verbal instructions for the learner. Vygotsky refers to this as cooperative or collaborative dialogue. The learner seeks to understand the actions or instructions provided by the tutor, then internalizes the information, using it to guide or regulate their own performance. The interactions with others significantly increases not only the quantity of information and the number of skills a learner develops; it also affects the development of higher order mental functions such as formal reasoning. Vygotsky argued that higher mental abilities could only develop through the interaction with more advanced others.

Vygotsky (1978) also views interaction with peers as an effective way of developing skills and strategies. He suggests that teachers use cooperative learning exercises where less competent children develop with help from more skillful peers - within the zone of proximal development. It implies that learners construct their own knowledge through interaction, and the assumption that knowledge is physically constructed by learners who are involved actively in learning process.

Based on the results of our study, self-motivation confirms constructivism theory of learning. Constructivist classrooms often have teachers who do small group work, collaborative and interactive activities, and open dialogues about what students need in order to motivate them to succeed. Motivation is key to learning. Students are unable to learn if they are unmotivated. Educators need to have ways to engage and motivate learners to activate their minds and help them to be excited about education. Without motivation, it is difficult for learners to reach into their past experience and make connections for new learning. On the contrary, the second hypothesis of the current study: students interaction, goes against Vygotsky's sociocultural perspective theory of learning which holds on the idea of the relationship between the social world and cognitive development. He views interaction with students as an effective way of developing skills and strategies. Vygotsky suggests that teachers use cooperative learning exercises where less competent students develop with help from more skillful students - within the zone of proximal development. Finally, personal efforts confirm with constructivism. Constructivism is based on your own experiences and beliefs; knowledge becomes a personal

affair. Each student will have their own prior knowledge and experiences to bring to the table. So the ways and things students learn and gain from education will all be very different.

Vygotsky emphasis on social interaction and culture but many other aspects for development are neglected such as the importance of emotional factors such as happiness, the sorrow, disappointments and frustration of failure of a student. Vygotsky did not equally take into account a student who is accompanied, mediated or receiving help from more skillful student or lecturer but still fails. The tasks assigned to the learner sometimes fall outside the ZPD that the learner can already do, or tasks that the learner would not be able to do even with help.

5.3 DISCUSSION OF RESULTS

➤ Hypothesis One

According to result obtained from hypothesis one, self-motivation has a significant influence on students' bilingual achievement. The Pearson correlation $r = 0.216$ indicates a positive but weak relationship between self-motivation and students' bilingual achievement. The results further reveals that the relationship between self-motivation and students' bilingual achievement was significant with a P value of 0.023 because the P value is < than 0.05. Therefore, we maintain the alternative hypothesis and reject the null hypothesis. Which means that there is a relationship between self-motivation and students bilingual achievement.

This is related to previous findings of Montero and Arizmendiarieta (2017) in the study titled the effectiveness of a learning strategies program for university students, this study presents the results of a Learning Strategies Course implemented at the School of Teacher Training and Education, University of Oviedo, Spain. A quasi-experimental design was used with an experimental ($n = 60$) and a control group ($n = 57$) of students on the Educational Psychology course. A Spanish adaptation of the Motivated Strategies for Learning Questionnaire (MSLQ): the CEAMR2 was used as a pre and post-test measure. Group A (EG) received training in learning strategies, while group B (CG) received no training. Results: Post-test measures showed significant differences in five out of the ten learning strategies assessed: elaboration, organization, repetition, self-questioning and study space, and also an improvement in one out of the six motivational scales: control of learning beliefs. The current study is similar to this previous study

in that it shows that learning strategies improves student motivation and learning belief. The self-motivation of the students enables them to go beyond the requirements of an educational course because they are looking for learning about the subject, not just performing a restricted number of conditions Ahmadi (2017). Students are expected to study more if they have individual attention in what they are learning about and are permitted to select their activities (Takaloo & Ahmadi, 2017). Based on the data revealed, students are self-motivated towards achieving bilingual education, it is very important to have motivation, meaning that students are both internally and externally motivated to achieve bilingual education in the faculty of education of the University of Yaounde 1.

➤ **Hypothesis Two**

According to result obtained from hypotheses two, students interaction has insignificant influence on students' bilingual achievement. The Pearson correlation $r = 0.064$ indicates a very weak relationship between students interaction and students bilingual achievement. The results further reveals that the relationship between students interaction and students bilingual achievement is not significant with a P value of 0.507 because the P value is $>$ than 0.05. Therefore, the null hypothesis is maintained and the alternative hypothesis is rejected. Which means that there is no relationship between students interaction and students bilingual achievement.

The result of the current study is contrary to the results of the previous study carried out by (Akcaoglu, 2016) titled increasing social presence in online learning through small group discussions, who investigated the effect of group size on students' perceptions of social presence in two graduate-level online courses, comparing small group versus whole class discussions. The results indicated that when in small group discussions, students perceived a higher level of social presence in terms of sociability, $t(32) = 3.507$, $p = .001$; social space, $t(29) = 3.074$, $p = .005$; and group cohesion, $t(32) = 3.550$, $p = .001$. This was to see how placing students in small and permanent discussion groups can augment social presence. Meanwhile according to the result of the current study, student do not need to interact to achieve bilingual education. It is similar to the current study in that both studies are on student's interaction in the teaching and learning process.

Even though through interaction, students “gain better understanding of the knowledge and become more committed to further learning” (Hay, Hodgkinson, Peltier, & Drago 2004, p. 195). Research reveals that a high level of student-student interaction improves the perceived quality of the learning experience (Peltier, Drago, & Schibrowsky, 2003) and has a positive influence on the learning outcomes (Hay et al., 2004; Topping, 1996; Cardoso, Ferreira, Abrantes, Seabra & Costa, 2011). The result is contrary to these previous claims. Based on the results of this study, students do not interact to achieve bilingual education. This means that none English speaking students do not interact with the French speakers and vice versa with the French speaking students, who should be their friends and who could be helping them to learn in the opposite language instruction.

➤ **Hypothesis Three**

The result obtained from hypotheses three, personal effort has a significant influence on students’ bilingual achievement. The Pearson correlation $r = 0.324$ indicates a positive relationship between personal efforts and students’ bilingual achievement. The results further reveals that the relationship between personal efforts and students bilingual achievement was significant with the P value of 0.001 because the P value is < than 0.05. Therefore, the alternative hypothesis is accepted and the null hypothesis is rejected. Which means that there is a relationship between personal effort and students’ bilingual achievement.

The result is similar to the study of Al-Alwan (2008) who investigate whether there is a statistically significant correlation between students’ learning strategies and their academic performance in learning business and accounting courses. The Learning Strategies Scale was adapted from the Motivated Strategies for Learning Questionnaire (MSLQ). This instrument includes 31 items concerning students’ use of different cognitive and metacognitive strategies and 19 items regarding student management of different resources. Students’ academic performance was measured by their Cumulative Grade Point Average (CGPA). A total of 312 business and accounting undergraduate students participated in this study. Based on the correlational analysis, the results showed that effort regulation was positively correlated to their academic performance. Nevertheless, there was no relationship between other subscales of the learning strategies and students’ academic performance. This study offers insights on the

relationship between learning strategies and academic performance which could assist to develop instructional strategies in enhancing students learning skills.

This result is equally similar to that of Zimmerman and Martinez-Pons (1988) who investigated on forty male and female 10th-grade students from a high achievement track and 40 from other (lower) achievement tracks of a suburban high school who were interviewed concerning their use of self-regulated learning strategies during class, homework, and study. Fourteen categories of self-regulation strategies were identified from student answers that dealt with six learning contexts. High achieving students displayed significantly greater use of 13 categories of self-regulated learning. The students' membership in their respective achievement group was predicted with 93% accuracy using their reports of self-regulated learning. When compared to students' gender and socioeconomic status indices in regression analyses, self-regulated learning measures proved to be the best predictor of standardized achievement test scores. The results were discussed in terms of a social learning view of self-regulated learning.

The current result is also related to previous claims that high students effort leads to greater educational values, which in turn indirectly affects students' performance. This effort has been measured in a variety of ways ranging from time spent on homework to attentiveness in class and all have linked with school performance Ceballo (2004). Based on the results of our study, students put in personal effort towards bilingual education achievement, meaning that students work extremely hard making use of every available material to achieve bilingual education. According to Carbonaro (2005), school effort is the amount of time and energy that students expend in the formal academic requirements established by their teachers and or their schools. He identifies three different types of school effort. These are: rule oriented effort (showing up to and behaving in class), procedural effort (meeting specific class demands such as assignments on time), and intellectual effort (critically thinking about and understanding the curriculum).

However apart from self-motivation, and personal effort, there are other factors that may influence students' bilingual achievement. Some of these factors include attention, rehearsal, elaboration, organization and metacognition strategies.

5.4 IMPLICATION OF FINDINGS

From the discussion above the research hypotheses were retained except one. The decision was based on the results from the Pearson correlation and regression which was the statistical tool used for data analysis. This implies that our research hypothesis did not hold for all our findings. Hence the second research hypothesis which states there is a relationship between students' interaction and students' bilingual achievement was rejected. While the other two research hypotheses for our study are accepted and the null is rejected.

5.5 RECOMMENDATIONS

To the lecturers: in using bilingual instruction lecturers should consider some techniques in teaching to improve students' bilingual education achievement. Lecturers should use marks as a reward for regular class participation and for active involvement in class. Also during class exposition, students should be obliged to expose in the language chosen by the lecturer or as decided by the course master.

To the university: given that it is a bilingual university, an equal number of English and French lecturers should be recruited.

To book writers, based on the fact that the University of Yaoundé 1 is a bilingual university, books should be written in both English and French for the achievement of perfect bilingualism.

To the students: students should be self-motivated, given that self-motivation leads to personal effort. In addition, it is important that students should learn to interact with friends of opposite language orientation because interaction will help facilitate the teaching and learning process by ameliorating their understanding of courses and eventual success towards the achievement of bilingual education.

Lastly, a student who chooses to study in a bilingual university should know the consequences, challenges and constraints before deciding to study in a bilingual university. If the student strongly believes that he/she can go through it well, then the choice is good. Otherwise, if the student thinks that they are not capable of that and prefer to study in a monolingual university, it is also a good decision as long as they study hard and persistently to achieve their objectives at the end. Therefore, as soon as they choose to study in a bilingual university, learning strategies should be designed in order to achieve their goal.

CONCLUSION

This study is set to investigate the relationship between learning strategies and students' bilingual achievement in the faculty of education of the University of Yaoundé I. We have as specific objectives; to ascertain the relationship between self-motivation and students' bilingual achievement, to find out the relationship between students interaction and students bilingual achievement, and lastly to examine the relationship between personal efforts and students bilingual achievement. The researcher identified three factors that can be used as predictors of students' bilingual achievement. They were self-motivation, students' interaction and personal effort. The research was designed and the following hypotheses were formulated. As general research hypotheses: there is a relationship between learning strategies and students' bilingual achievement. And our specific hypotheses were as follows: Ha1: there is a relationship between self-motivation and students' bilingual achievement. Ha2: there is a relationship between student's interaction and students' bilingual achievement. Ha3: there is a relationship between personal effort and students' bilingual achievement. Methodologically, Questionnaire was used as instrument for data collection to collect data from master II students of CEV and EFE, which was analyzed using the Pearson correlation and regression "Learning strategies and students' bilingual achievement in the faculty of education of the university of the Yaoundé I" was examined. The following results were obtained from the findings. According to result obtained from hypothesis one, self-motivation was seen to have a significant influence on students' bilingual achievement. The Pearson correlation $r = 0.216$ indicates a positive but weak relationship between self-motivation and students' bilingual achievement. The relationship between self-motivation and students' bilingual achievement was significant with a P value of 0.023 because the P value is < than 0.05, therefore, the alternative hypothesis was maintained and the null hypothesis was rejected. Which means that there is a relationship between self-motivation and students bilingual achievement. Also according to result obtained from hypotheses two, students interaction was seen to have an insignificant influence on students' bilingual achievement. The Pearson correlation $r = 0.064$ indicates a very weak relationship between students interaction and students bilingual achievement. The relationship between students interaction and students bilingual achievement was insignificant with a P value of 0.507 because the P value is > than 0.05, therefore, the null hypothesis was accepted and the alternative hypothesis was rejected. Which means that there is no relationship between students interaction

and students bilingual achievement. Lastly according to the result obtained from hypotheses three, personal effort was seen to have a significant influence on students' bilingual achievement. The Pearson correlation $r = 0.324$ indicates a positive relationship between personal efforts and students' bilingual achievement. The relationship between personal efforts and students' bilingual achievement was significant with the P value of 0.001 because the P value is $<$ than 0.05. Therefore, the alternative hypothesis was maintained and the null hypothesis was rejected. Which means that there is a relationship between personal effort and students' bilingual achievement. From the findings of the study it is very clear that self-motivation and personal effort has significant influence on student bilingual achievement while students' interaction has insignificant influence on students' bilingual achievement in the faculty of education of the University of Yaoundé I. meaning that if students are self-motivated, they will put in personal effort to achieve bilingual education. It can therefore be concluded that self-motivation and personal effort influence student's bilingual achievement in the faculty of education of the University of Yaoundé I. At the level of theoretical framework, behaviorist theory of learning, social cognitive theory and sociocultural theory of learning was used.

SUGGESTION FOR FURTHER STUDIES.

Based on the research results, the writer will propose suggestions regarding this research and for further continuation, they are:

It is admitted that this research is still lack of perfection. In this study the researcher only finds out learning strategies used by students to achieve bilingual education. The study was limited to two departments of the faculty of science of education of the university of Yaoundé I. Future studies should use larger samples from different colleges and universities in Cameroon. More research will help throw light on bilinguals and school achievement. Therefore, it is necessary to have further research to elaborate what cannot be completed in this research. Move over, as a suggestion for prospective researchers, the survey method in general and from a theoretical perspective has some limitations and is widely debated in terms of its usefulness, rigor and appropriateness in the research methods literature.

The survey method alone cannot adequately establish causal relationships between certain variables and outcomes or circumstances, and quantitative surveys do not describe the

meaningful aspects of social action or the contexts of human beliefs and actions (De Vaus, 1993). Similar research can be conducted by applying other research methods, including qualitative methods. Other methods can be used for data collection like interview and a greater number of participants would deepen this study and its interrelation in the field of science of education. Also similar researches are expected to be conducted for other educational level. Moreover, other modalities for data collection from the field could be considered such as age of participants. Finally, assessing generalizability and applicability of the obtained findings from the study to a broader temporal and spatial scope.

BIBLIOGRAPHICAL REFERENCES

- Abdurrahman, M. S. & Garba, I. M. (2018). The impact of motivation on students' academic achievement in Kebbi State Junior Secondary School Mathematics. *International Journal of Advance Research*, 2(12), 1-15.
- Abongdia, J-F. A. (2014). Ideologies and Attitudes towards Pidgin English in Cameroon. *Mediterranean Journal of Social Sciences*, 601-608.
- Abuhamdeh, S., Csikszentmihalyi, M. & Jalal, B. (2015). Enjoying the possibility of defeat: Outcome uncertainty, suspense, and intrinsic motivation. *Motivation and Emotion*, 39(1), 1-10.
- Agran, M. (1997). *Student directed learning: Teaching self-determination skills*. Brooks/Cole Publishing Company.
- Ahmadi, M. R. (2017). The impact of motivation on reading comprehension. *International Journal of Research in English Education*, 2(1), 1-7.
- Ahmed, Z. A. A. (2016). The Effect of Motivation on Developing EFL Learners 'Reading Comprehension Skills. *International Journal of English Language Teaching*, 4(10), 1-9.
- Akcaoglu, M. Ö. (2016). Teacher Candidates' Learning Strategies and Academic Self-Efficacy Levels: Is There a Relation Between the Two? *Cumhuriyet International Journal of Education*, 5(3), 48-66.
- Akın, A. (2006). *The relationships between achievement goal orientations and metacognitive awareness, parenting styles and academic achievement* [Unpublished master's thesis]. Sakarya University, Sakarya.
- Akinoğlu, O. & Bakır, S. (2003). A situation analysis of primary school students' learning of geography issues in the social studies course. *Marmara Geographical Review*, 8, 83-106.

- Al-Alwan, A. F. (2008). Self-regulated learning in high and low achieving students at Al-Hussein Bin Talal University (AHU) in Jordan. *International Journal of Applied Educational Studies*, 1(1), 1-13.
- Aleven, V. & Koedinger, K. R. (2002). An effective metacognitive strategy: Learning by doing and explaining with a computer-based cognitive tutor. *Cognitive Science*, 26, 147-179. Doi: 10.1016/S0364-0213(02)00061-7
- Alexander, P. A. Graham, S. & Harris, K. R. (1998). A Perspective on Strategy Research: Progress and Prospects. *Educational Psychology Review*, 10(2), 129–154.
- Ali, M. M., Medhekar, A. & Rattanawiboonsom, V. (2017). Quality enhancement in teaching-learning strategies of Bangladesh: A qualitative assessment. *International Journal of Advanced Trends in Technology: Management and Applied Science*, 3(1), 121–147.
- Allwright, D. (1990). *Autonomy in Language Pedagogy*. CRILE Working Paper 6. University of Lancaster.
- Amin Z. (2000). Q methodology- A journey into the subjectivity of human mind. *Singapore Medical Journal*, 41(8),410-414.
- Amin, M. E. (2005). *Social Science Research; Conception, Methodology and Analysis*. Makerere University Printery.
- Arjun, S-P. & Verberne, J. (2015). *A Nation Divided by Language: Anglophone Students and Bilingualism in a Predominantly Francophone Cameroon* [Bachelor Thesis Cultural Anthropology and Development Sociology]. Utrecht university, Netherlands
- Arulselvi, E. (2006). Learning strategy training in English teaching. *I-manager's Journal on English Language Teaching*, 1-7.
- Atindogbé, Gratien G. & Dissake, K. M. Endurance. (2019). *Being multilingual in a bilingual environment: Implications for quality education*. Oasis, COL's Open Access Repository. URI: <http://hdl.handle.net/11599/3357>

- Ayafor, I. M. (2001). Colonial Bilingual Heritage and Post-Colonial Myths in Cameroon's School System. *Journal of Cultural Studie*, 56-73.
- Ayafor, Isaiah Munang. 2005. "Official bilingualism in Cameroon: Instrumental or integrative policy?" Proceedings of the 4th International Symposium on Bilingualism.
- Baker, C. (2001). *Foundation of bilingual education and bilingualism: The development of bilingualism (3rd ed.)*. Multilingual Matters
- Baker, C. (2006). *Foundation of Bilingual Education and Bilingualism (4th ed.)*. Multilingual Matters.
- Bandura A (1971) *Social Learning Theory*. General Learning Press.
- Bandura A (1988) Organizational application of Social Cognitive Theory. *Australian Journal of Management* 13(2): 275-302.
- Bandura A (1998) Health promotion from the perspective of Social Cognitive Theory. *Psychology and Health* 13(4): 623-649.
- Bandura A (2000) Exercise of human agency through collective efficacy. *Current Directions in Psychological Science* 9(3): 75-78.
- Bandura A (2001) Social cognitive theory of mass communication. *Media Psychology* 3(3): 265-299.
- Bandura A (2004) Health promotion by social cognitive means. *Health Education & Behavior* 31(2): 143-164.
- Bandura A (2009) Social Cognitive Theory of mass communication. *Media Psychology* 3(3): 264-299.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Prentice-Hall.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191- 215. Doi:10.1037/0033-295x.84.2.191

- Bandura, A. (1986). *Social foundations of thought & action: A social cognitive theory*. Prentice-Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175-1184. Doi :10.1037/0003-066X.44.9.1175
- Bandura, A. (2002). Social cognitive theory of mass communication. In J. Bryant & M. B. Oliver (Eds.), *Media effects: Advances in theory and research* (pp. 94-124). Routledge
- Bandura, A. (2006). *Toward a psychology of human agency. Perspectives on Psychological Science*, 1, 164-180.
- Bashir, S., Lockheed, M., Ninan, E. & Tan, J.-P. (2018). *Facing forward: Schooling for learning in Africa*. The World Bank. <https://www.worldbank.org/en/region/afr/publication/facing-forward-schooling-for-learning-in-africa>.
- Becker, A. L. 1995. *Beyond translation: Essays toward a modern philosophy*. University of Michigan Press.
- Bialystok, E. (2006), *Bilingualism in development: language, literacy & cognition*. University Press.
- Bialystok, E. (2017). *Second-language acquisition and bilingualism at an early age and the impact on early cognitive development. Encyclopedia on Early Childhood Development*. Retrieved from http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/614/second-language_acquisition-and-bilingualism-at-an-early-age-and-the-impact-on-early-cognitive-development.pdf
- Bialystok, E. & Luk, G. (2013). Bilingualism is not a categorical variable: Interaction between language proficiency and usage. *Journal of Cognitive Psychology*, 25(5), 605–621. <http://dx.doi.org/10.1080/20445911.2013.795574>
- Biggs, J. B. (1987). *Student approaches to learning and studying*. Hawthorn. Australian Council for Educational Research.

- Bloomfield, L. (1933) *Language*. Holt Rinehart and Winston. (published in 1935 by George Allen and Unwin, London).
- Borich, G.D. (1996). *Effective Teaching Methods*. Prentice-Hall.
- Boroch, D., Hope, L., Smith, B., Gabriner, R., Mery, P., Johnstone, R. & Asera, R. (2010). *Student success in community colleges (a practical guide to developmental education)*. Jossey-Bass.
- Braten, I. & Olaussen, B. S. (1998). The relationship between motivational beliefs and learning strategy use among Norwegian college students. *Contemporary Educational Psychology*, 23, 182-194
- Brice, A.E. & Brice, R.G. (Eds.). (2009). *Language development: Monolingual and bilingual acquisition*. Pearson Education.
- Broadbent, J. & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, 27, 1-13.
- Brown, A. & Dowling, P. (1998). *Doing Research/Reading research: A mode of Interrogation for Education*. The Falmer Press.
- Brunner, J. (2001). *El Proceso Mental en el Aprendizaje*. Narcea.
- Bryman, A. (2001). *Social Research Methods*. Oxford University Press
- Buchori, A., Setyosari, P., Dasna, W., Degeng, N. S. & Sa'dijah, C. (2017). Effectiveness of direct instruction learning strategy assisted by mobile augmented reality and achievement motivation on students cognitive learning results. *Asian Social Science*, 13(9), 137–145.
- Buluş, M. (2011). Goal orientations, locus of control and academic achievement in prospective teachers: An individual differences perspective. *Educational Sciences: Theory & Practice*, 11(2), 540-546.

- Burns, N. & Grove, S. K. (2009). *The practice of nursing research: appraisal, synthesis, and generation of evidence*. Elsevier.
- Butler, Y.G. (2013). Bilingualism/Multilingualism and Second-Language Acquisition. In Bhatia, T.K. & Ritchie, W.C. (Ed.), *The Handbook of Bilingualism and Multilingualism: Second Edition* (pp. 109-136). Blackwell Publishing.
- Cameroon, R. o. (2001). Law N^o. 005 to Guide Higher Education. pp. 1-13.
- Cameroon. (1996). *Constitution of the Republic of Cameroon*. Groupe Mauger.
- Cano de Araúz, O. (2009). Language learning strategies and its implication for second language teaching. *Revista de Lenguas Modernas*, 11(1), 399-411.
<https://revistas.ucr.ac.cr/index.php/rlm/article/view/9454/8904>
- Carbonaro, W. (2005). Tracking student's effort, and academic achievement. *Sociology of Education*, 78(1), 27-49.
- Cardoso, A. P., Ferreira, M., Abrantes, J.L., Seabra, & Costa, C. (2011). Personal and pedagogical interaction factors as determinants of academic achievement. *Procedia – Social and Behavioral Sciences*, 29(00) 1596-1605, *disponível em www.sciencedirect.com*
- Carter, V.G. (1959). *Foundation in Education: Dictionary of Education*. McGraw Hill Book Co.
- Ceballo, R. (2004). From barrios to Yale: The role of parenting strategies in Latino families. *Hispanic Journal of Behavioral Sciences*, 26, 171-186
- Çelikkaya, T. & Kuş, Z. (2010). The frequency of students' usage of learning strategies in social study course. *Selçuk University Journal of Ahmet Keleşoğlu Education Faculty*, 29, 321-336.
- Cerasoli, C. P. & Ford, M. T. (2014). Intrinsic motivation, performance, and the mediating role of mastery goal orientation: A test of self-determination theory. *The Journal of psychology*, 148(3), 267-286.

- Chan, K. W., Wong, A. K. Y. & Lo, E. S. C. (2012). Relational analysis of intrinsic motivation, achievement goals, learning strategies and academic achievement for Hong Kong secondary students. *The Asia Pacific Education Researcher*, 21(2), 230-243.
- Chaplin, J.P. (1965). *Dictionary of psychology*. Laural Book.
- Chiu, M. M., Chow, B. W.-Y. & McBride-Chang, C. (2007). Universals and specifics in learning strategies: Explaining adolescent mathematics, science, and reading achievement across 34 countries. *Learning and Individual Differences*, 17(4), 344–365. Doi: 10.1016/j.lindif.2007.03.007.
- Cho, S. & Ahn, D. (2003). Strategy acquisition and maintenance of gifted and non-gifted young children. *Council for Exceptional Children*, 69(4), 497-505.
- Christopherson, P. (1948). *Bilingualism*. Methuen Press
- Chumbow, S. B. (1980). Language and language policy in Cameroon. In N. Kofele Kale (ed), *An African experiment in nation building: The bilingual Republic of Cameroon since reunification* (pp 281-311). Westview Press.
- Congress of the United States. (1992). *Testing in American Schools: Asking the Right Questions*. US Government Printing Office.
- Constable, D. (1974). "Bilingualism in the United Republic of Cameroon: Proficiency and Distribution." *Comparative Education* 10(3) 233-46.
- Corpus, J. H. & Wormington, S. V. (2014). Profiles of intrinsic and extrinsic motivations in elementary school: A longitudinal analysis. *The Journal of Experimental Education*, 82(4), 480-501.
- Coutinho, S. A. (2007). The relationship between goals, metacognition and academic success. *Educate*, 7(1), 39-47.
- Credé, M. & Phillips, L. A. (2011). A meta-analytic review of the Motivated Strategies for Learning Questionnaire. *Learning and Individual Differences*, 21, 337–346. <https://doi>.

- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson Education.
- De Vaus, D. A. (1993) *Surveys in Social Research* (3rd ed.). UCL Press.
- Demirbas, O. & Demirkan, H. (2007). Learning Styles of Design Students and the Relationship of Academic Performance and Gender in Design Education. *Learning and Instruction, 17*, 345-359.
- Díaz, M. A., Zapata, N. A., Díaz, H. H., Arroyo, J. A. & Fuentes, A. R. (2019). Use of learning strategies in the university. A case study. *Propósitos y Representaciones Monographic. Advances on Qualitative Research in Education, 7*(1), 10–32.
- Dikbaş, Y. & Kaf Hasırcı, Ö. (2008). The effects of teaching and using of learning strategies on achievement, retention and attitude of the students. *Ahi Evran University Journal of Kırşehir Education Faculty, 9*(2), 69-76.
- Donker, A. S. de Boer, H., Kostons, D., Dignath van Ewijk, C. C., & van der Werf, M. P. C. (2014). Effectiveness of learning strategy instruction on academic performance: A meta-analysis. *Educational Research Review, 11*, 1–26. <https://doi.org/10.1016/j.edurev.2013.11.002>.
- Drost, E. A. (2011). Validity and Reliability in Social Science Research Education. *Research and Perspectives 38*, 105-123.
- Duckworth, A. L. & Seligman, M. E. P. (2006). Self-discipline gives girls the edge: Gender in self-discipline, grades, and achievement test scores. *Journal of Educational Psychology, 98*, 198–208. <https://doi.org/10.1037/0022-0663.98.1.198>
- Duncan, T. G. & McKeachie, W. J. (2005). The making of the Motivated Strategies for Learning Questionnaire. *Educational Psychologist, 40*, 117–128. https://doi.org/10.1207/s15326985ep4002_6.

- Dupraz, Y. (2015). French and British Colonial Legacies in Education: A Natural Experiment in Cameroon. *Journal article of Paris School of Economics*. <https://www.parisschoolofeconomics.eu/IMG/pdf/jobmarket-paper-dupraz-pse.pdf>.
- Echu, G. (2013). The Language Question in Cameroon. *Linguistik online 18* (1) 19-33.
- Enama, P. R. (2016). The Impact of English-only and Bilingual Approaches to EFL Instruction on Low-achieving Bilinguals in Cameroon: An Empirical Study. *Journal of Language Teaching and Research*, 19-30.
- Eshel, Y. & Kohavi, R. (2003). Perceived classroom control, self-regulated learning strategies, and academic achievement. *Educational Psychology*, 23(3), 249-260
- Evans, R. I. & Bandura, A. (1989). *The man and his ideas: A dialogue*. Praeger.
- Faukner, D. Littleton, K., & Woodhead, M. (Eds.). (2013). *Learning relationships in the classroom*. Routledge.
- Fellenz, R. A. & Conti, G. J. (1989). Learning and reality. Reflections on trends in adult learning. Information Service N°336. Columbus, OH. Ohio State University. ERIC Clearinghouse on Adult, Career and Vocational Findings. (ED), *Office of Educational Research and Improvement*. Washington, DC.
- Fellenz, R. & Conti, G. (1993). Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS): Manual. Bozeman, MT: Center for Adult Learning Research. Columbus, OH. Ohio State University. ERIC Clearinghouse on Adult, Career and Vocational Findings. *Theory and Practice in Language Studies*, 3(2), 254-262.
- Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive development inquiry. *American Psychologist*, 34(10), 906–911
- Froiland, J. M. & Oros, E. (2014). Intrinsic motivation, perceived competence and classroom engagement as longitudinal predictors of adolescent reading achievement. *Educational Psychology*, 34(2), 119-132.

- García, O. (1997) "Bilingual education." In Coulmas, F. (Ed.) *The handbook of sociolinguistics*. Blackwell. 405-420
- Garcia, O. (2009). *Bilingual education in the 21st century. A global perspective*. Wiley-Blackwell.
- Garner, R. (1990). When children and adults do not use learning strategies: Toward a theory and settings. *Review of Educational Research*, 60(4), 517-529.
- Gates, A. I. (1917). Recitation as a factor in memorizing. *Archives of Psychology*, 6(40), 1–104.
- Gbollie, C. & Keamu, H. P. (2017). Student academic performance: The role of motivation, strategies, and perceived factors hindering Liberian junior and senior high school students learning. *Education Research International*, 4(8), 72-88
- Gerhart, B. & Fang, M. (2015). Pay, intrinsic motivation, extrinsic motivation, performance, and creativity in the workplace: Revisiting long-held beliefs. *Annual. Rev. Organ. Psychol. Organ. Behav*, 2(1), 489-521.
- Gestanti, R. A. (2017). Listening strategies employed by non-English department students. *Journal on English as a Foreign Language*, 7(1), 35-58.
- Goetzke, E. (2019). Why don't students use effective learning strategies?—A reflection. A TILE Talk Reflection. <https://learningspaces.dundee.ac.uk/tile/2019/03/20/reflection-dr-flavia-schechtman-belhams-talk-on-why-dont-students-use-effective-learning-strategies>
- Grosjean, F. (2010). *Bilingual: Life and Reality*. Harvard University Press.
- Grosjean, F. (1982). *Life with two Languages*. Harvard University Press.
- Hamers J.F. & Blanc M.H.A. (2000). *Bilinguality and Bilingualism* (2nd ed). Cambridge University Press.
- Harding-Esch, E. & Riley, P. (2003). *The Bilingual Family. A handbook for parents*. (2nd ed). Cambridge University Press.

- Hartwig, M. & Dunlosky, J. (2012). Study strategies of college students: Are self-testing and scheduling related to achievement? *Psy-chonomic Bulletin & Review*, 19(1), 126–134. Doi:10.3758/s13423-011-0181-y
- Hattie, J., Biggs, J. & Purdie, N. (1996). Effects of Learning Skills Interventions on Student Learning: A Meta-Analysis. *Review of Educational Research*, 66(2), 99–136. <https://doi.org/10.3102/00346543066002099>
- Haugen, E. (1953). *The Norwegian language in America: A study in bilingual behavior*. Univ. of Pennsylvania Press.
- Hay, A., Hodgkinson, M., Peltier, J. & Drago, W. (2004). Interaction and virtual learning. *Strategic Change*, 13 (4), 193-204
- Hernández-Pina, F., García-Sanz, M. P. & Maquilon., J (2004). Análisis del Cuestionario de Procesos de Estudio - 2 Factores de Bigg en Estudiantes Universitarios Españoles. *Revista Fuentes*, 6, 96-114
- Hilgard, E.R., Atkinson, R.L. & Atkinson, R.C. (1979). *Introduction to psychology* (7th ed.). Harcourt Brace Jovanovich.
- Hoffmann, C. (1991). *An Introduction to Bilingualism*. Longman.
- Hooper, S., Sales, G., Rysavy, S. D. (1994). Generating summaries and analogies alone and in pairs. *Contemporary Educational Psychology*, 19(1), 53-62.
- Hornberger, N.H. (1991) “Extending enrichment bilingual education: revisiting typologies and redirecting policy.” In García, O. (ed.) *Bilingual education: focusschrift in honor of Joshua A. Fishman*. (pp. 215-234). University Press.
- Hosenfeld, C. (1976). Learning about learning: Discovering our student’s strategies. *Foreign Language Annals*, 9, 117-129.
- Hoy, W.K. & Miskel, C.G. (1998). *Educational Administration: Theory Research and Practice*. (5nd ed). Printice Hill. Inc.

- Ignatkina, A. L. & Tosuncuoğlu, I. (2020). The reality of bilingualism. *Language of Science and Professional Communication*, 1(2), 108-114.
- James, W. (1950). *The principles of psychology*. Dover.
- Jiang, Y., Song, J., Lee, M. & Bong, M. (2014). Self-efficacy and achievement goals as motivational links between perceived contexts and achievement. *Educational Psychology*, 34(1), 92-117. Doi: 10.1080/01443410.2013.863831
- Jimenez, L., Garcia, A.-J., Lopez-Cepero, J. & Saavedr, F.-J. (2017). The brief-ACRA scale on learning strategies for university students. *Revista de Psicodidactica*, 23(1), 63–69. Doi: 10.1016/j.psicod. 2017.03.001.
- Jonassen, D.H. (1985). Learning strategies: A new educational technology. *Programmed Learning and Educational Technology*, 22(1), 26- 34.
- Jones, B.F., Sullivan Palincsar, A., Sederburg Olge, D. & Glynn Carr, E. (Eds.). (1987). *Strategic teaching and learning: Cognitive instruction in the content areas*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Jones, H. E. (1923-1924). *The effects of exam- ination on the performance of learning*. Archives of Psychology, 10, 1–70.
- Joseph, N. (2015, 2). *Cameroun: A Francophone Bilingual Country*. Retrieved from www.Camer.be June,2007, University of Hamburg). <http://archiv.gwin.gwiss.uni-hamburg.de/isb6/proceedings/kouega.pdf>
- Juste, M. P. & Lopez, B. R. (2010). Learning strategies in higher education. *International Journal of Learning*, 17(1), 259–274. Doi: 10.18848/1447-9494/CGP/v17i01/46813.
- Justine, F. (2016). The Implications of Integrating Science Technology and English in A Bilingual University: The Case of the University of Dschang. *Valley International Journals*, 1816-1827.

- Karpicke, J. D., Butler, A. C. & Roediger, H. L., III. (2009). Metacognitive strategies in student learning: Do students practice retrieval when they study on their own? *Memory*, 17(4), 471– 479. Doi: 10.1080/09658210802647009
- Kayan Fadlelmula, F. (2011). *A structural model on 7th grade students' motivational beliefs, use of self-regulation strategies, and mathematics achievement* [Unpublished doctoral dissertation]. Middle East Technical University, Ankara.
- Kendemeh, Emmanuel. (2017). “*Penal Code, OHADA Law: Official English Versions Handed to Lawyers.*” 19 January. <https://www.cameroon-tribune.cm/articles/4558/fr/> .
- Kerlinga, F.N. (1973). *Foundation of Behavioral Research, Educational and Psychological Inquiry*. Rinehalt and Winston.
- Knowles, M. S. (1970). *The modern practice of adult education: Andraooov versus pedagogy*. Association Press.
- Köktürk, Ş., Odacıoğlu, M. C. & Uysal, N. M. (2016). *Bilingualism and bilingual education, bilingualism and translational action. International Journal of Linguistics*. 8(3), 72-89. Retrieved from: http://acikerisim.bartın.edu.tr/bitstream/handle/11772/2801/Bilingualism_and_Bilingual_Education_Bil.pdf?sequence=1&isAllowed=y.
- Kolody, R. C. & Conti, G. J. (1996). *The use of learning strategies: Do distinctive groups of learners exist?* In Proceedings of the 37th Annual Adult Education Research Conference. (pp. 199-204). Tampa, FL: University of South Florida,
- Kouega, J.P. (2008). *Bilingualism at Tertiary Level Education in Cameroon: The Case of the University of Yaounde II (Soa)*. ISB6: Proceedings of the 6th International [Symposium] on Bilingualism 30th May – 2^{ed} June, 2007, University of Hamburg. <http://archiv.gwin.gwiss.uni-hamburg.de/isb6/proceedings/kouega.pdf>
- Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610. Doi: 10.1177/001316447003000308

- Labov, W. (2006). *The social stratification of English in New York City*. (2nd ed). Cambridge University Press.
- Labuhn, A.S., Zimmerman, B.J. & Hasselhorn, M. (2010). Enhancing students' self-regulation and mathematics performance: The influence of feedback and self-evaluative standards. *Metacognition and Learning*, 5 (2), 173-194.
- Lambert, W. E. (1974). *Culture and language as factors in learning and education*. In Frances E. Aboud & Robert, D. Meade. Cultural Factors in Learning and Education. Proceedings of 5th Western Washington [Symposium] on Learning (pp. 99–122). Bellingham, WA: Western Washington University.
- Lashley, C. & Barron, P. (2006). The Learning Style Preferences of Hospitality and Tourism Students: Observations from an International and Cross-Cultural Study. *Hospitality Management*, 25, 552-569
- Lefrancois, G. R. (1999). *Psychology for teaching* (10th ed.). Wadsworth Thomson Learning.
- Lemos, M. S. & Veríssimo, L. (2014). The relationships between intrinsic motivation, extrinsic motivation, and achievement, along elementary school. *Procedia-Social and Behavioral Sciences*, 112(18) 930-938.
- Little, D. (1991). Learner autonomy 1: Definitions, issues, and problems. Authentik.
- Liu, O. L. (2009). Evaluation of a learning strategies scale for middle school students. *Journal of Psychoeducational Assessment*, 27(4), 312-322. Doi: 10.1177/0734282908327935
- Liu, O. L., Jackson, T. & Ling, G. (2008). *An initial field trial of an instrument for measuring learning strategies of middle school students* (Research Report ETS RR-08-03). Educational Testing Service.Ltd.
- Luma, L.E. (1983). *The Education of African Teachers*. (2nd ed). Yaounde: SOPECAM.
- Mackey, W.F. (1970). The description of bilingualism. In J.A. Fishman (Ed.), *Readings in the society of language* (2nd ed, pp.554–584). Mouton & Co.

- Macnamara, J. (1967). The Bilingual's Linguistic Performance—A Psychological Overview. *Journal of Social Issues, 23*, 58–77.
- Malarz, L. (1998) Bilingual Education: Effective Programming for Language-Minority Students. http://www.ascd.org/publications/curriculum_handbook/413/chapters/Bilingual_Education@_Effective_Programming_for_Language-Minority_Students.aspx.
- Maturana, H. and Varela, F. 1998 [1973]. *The tree of knowledge. The biological roots of human understanding*. Shambhala.
- Mayer, R. E. (1987). Learning strategies: An overview. In C. Weinstein, E. Goetz, & P. Alexander (Eds.). *Learning and study strategies: Issues in assessment, instruction, and evaluation*. Academic.
- McCarthy, S. (2010). *Bilingual Child-raising possibilities in Japan*. Child Research Net: Research papers. retrieved February 7, 2020. <https://childresearchnet>.
- McKeachie, W. J. (Ed.) (1980). *Learning, cognition, and college teaching (New Directions for Teaching and Learning, Number 2)*. Jossey-Bass.
- McKeachie, W. J., Pintrich, P. R., Lin, Y. G., Smith, D. A. F. & Sharma, R. (1990). *Teaching and learning in the college classroom. A review of the research literature*. (2nd e.d.). Ann Arbor, MI: National Center for Research to Improve Postsecondary Teaching and Learning
- McLeod, S.A. (2018). *Lev. Vygotsky: Simply Psychology*, [https:// www. simplypsychology. org/vygotsky.html](https://www.simplypsychology.org/vygotsky.html), retrieved February 21, 2020.
- McMullen, M. G. (2009). Using language learning strategies to improve the writing skills of Saudi EFL students: Will it really work? *System, 37*(3), 418–433. Doi: 10.1016/j.system.2009.05.001.
- McWhaw, K. & Abrami, P. C. (2001). Student goal orientation and interest: Effects on students' use of self-regulated learning strategies. *Contemporary Educational Psychology, 26*, 311-329.

- Milano, M. & Ullius, D. (1998). *Designing powerful training: The sequential-iterative model*. Josey-Bass.
- Miller, P. (2011). *Theories of developmental psychology* (5th ed.). Worth Publishers.
- MINESUP. (2014). *L'enseignement supérieur au Cameroun: Cartographie 2014 des Institutions*. Yaoundé: *Ministère de l'Enseignement supérieur*.
- Mohanty, A.K. (1994) *Bilingualism in a Multilingual Society: Psychosocial and Pedagogical Implications*. Mysore: Central Institute of Indian Languages.
- Montero, C. R. & Arizmendiarieta, B. S. Y. (2017). The effectiveness of a learning strategies program for university students. *Psicothema*, 29(4), 527–532. Doi: 10.7334/psicothema2016.171.
- Moradi, H. (2014). An Investigation through Different Types of Bilinguals and Bilingualism. *International Journal of Humanities and Social Science Studies*, 2, (1), 107-112.
- Moreno, F. (2009). *Principios de sociolingüística y sociología del lenguaje*. Ariel Letras
- Mosima, E. (2016). *Cameroon: Bilingualism Week-Mbalngong Takes the Lead*. Retrieved from allAfrica: <http://www.allafrica.com>
- Muelas, A. & Navarro, E. (2015). *Learning strategies and academic achievement*. *Procedia – Social and Behavioral Sciences*, 165 217–221. Doi: 10.1016/j.sbspro.2014.12.625, Proceeding in CPSYC 2014.
- Nabi & M. B. Oliver (Eds.), *The sage handbook of media processes and effects*. pp. 283-297. SAGE Publications, Inc.
- Nikou, S. A., & Economides, A. A. (2019). Mobile-based micro-learning and assessment: Impact on learning performance and motivation of high school students. *Journal of Computer Assisted Learning*, 34(3), 269–278. Doi: 10.1111/jcal.12240.
- Nugent, Pam M.S. (2013, May 11). "FOLK BILINGUALISM," in *PsychologyDictionary.org*. Retrieved November 30, 2017, from <https://psychologydictionary.org/folk-bilingualism>

- Nworgu, B.G. (1991). *Educational Research: Basic Issues and methodology*. Wisdom Publishers.
- O’Leary, C. (2014). Developing autonomous language learners in HE: A social constructivist perspective. In G. Murray (Ed.), *Social dimensions of autonomy in language learning* (pp. 15-36). Palgrave
- O’Malley, J. M. & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge University Press.
- Oestreicher, J.P. (1974). The early teaching of a modern language, education and culture. *Council for cultural cooperation of the council of Europe*, 24, 9–16.
- Ormrod, J. (2008). *Human learning* (5th ed.). Pearson Education.
- Oxford, R.L. (1990). *Language Learning Strategies. What Every Teacher Should Know*, Heinle & Heinle Publication.
- Pajares, F., Prestin, A. Chen, J. & Nabi, R. L. (2009). Social cognitive theory and media effects. In R. L. Nabi, & M. B. Oliver (Eds.), *The sage handbook of media processes and effects* (pp. 283-297). SAGE Publications, Inc.
- Palinscar, A. S. (1998). Keeping the metaphor of scaffolding fresh: A response to C. Addison Stone’s The metaphor of scaffolding: Its utility for the field of learning disabilities. *Journal of Learning Disabilities*, 31, 370-373.
- Pálsdóttir A (2013) Social cognitive theory. In Wilson TD (eds). *Theory in Information Behaviour research*. Sheffield, UK: Eiconics Ltd. [E-book] ISBN 978-0-9574957-0-8.
- Pam, M.S. (2016). *What is learning strategies? Definition of learning strategy*. psychology dictionary available at: <http://psychologydictionary.org/learning-strategy/>
- Pananaki, M. M. (2015). *Bilingual Theories and the Swedish Bilingual Profile Reflected in the Classroom: A comparative case- study in two British bilingual schools*. [Master Thesis, Institute of International Education,] Stockholms university.

- Paradis, M. (1997). Bilingualism and aphasia. In H. A. Whitaker & H. Whitaker (Eds), *Neurolinguistics*, 3 (pp. 65-121. Academic Press.
- Paradis, M. (2010). Bilingual Children's acquisition of English verb morphology: effects of language exposure, structure complexity, and task type. *Language Learning*, 60 (3), 651-680.
- Paris, S. B. & Myers, M. (1981). Comprehension monitoring, memory, and study strategies of good and poor readers. *Journal of Reading Behavior*, 13(1), 5-22.
- Parkay, F. W. & Hass, G. (2000). *Curriculum planning* (7th ed.). Allyn & Bacon.
- Pecjak, S. & Kosir, K. (2018). Reading Motivation and Reading Efficiency in Third and Seventh Grade Pupils in Relation to Teachers' activities in The Classroom. *Studia Psychologica*, 50(2), 147-169
- Pekrun, R., Elliot, A. & Maier, M.A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, 101(1), 115-135. Doi: 10.1037/a0013383
- Peltier, J. W., Drago, W. & Schibrowsky, J. A. (2003). Virtual communities and the assessment of online marketing education. *Journal of Marketing Education*, 25 (3), 260-276.
- Pennequin, V., Sorel, O., Nanty, I. & Fontaine, R. (2010). Metacognition and low achievement in mathematics: The effect of training in the use of metacognitive skills to solve mathematical word problems. *Thinking and Reasoning*, 16(3), 198–220. Doi: 10.1080/13546783.2010.509052.
- Piaget, J. (1959). *The language and thought of the child* (3rd ed.). Routledge & Kegan Paul.
- Pieretti, R. A. & Roseberry-McKibbin, C. (2016). Assessment and intervention for English language learners with primary language impairment: Research-based best practices. *Communication Disorders Quarterly*, 37(2), 117–128.

- Pinto, G., Bigozzi, L., Vettori, G. & Vezzani, C. (2018). The relationship between conceptions of learning and academic outcomes in middle school students according to gender differences. *Learning, Culture and Social Interactions*, 16, 45–54. Doi: 10.1016/j.lcsi.2017.11.001.
- Pintrich, P. R. & Garcia, T. (1993). Individual differences in students' motivation and self-regulated learning. *German Journal of Educational Psychology*, 7(2–3), 99–107.
- Polit, D. F. Hungler, B. P. & Beck, C. T. (2001). *Essentials of nursing research: methods, appraisal and utilization*. Lippincott.
- Pressley Michael, Goodchild, F., Fleet, J., Zajchowski, R. & Evans, E. D. (1989). The Challenges of Classroom Strategy Instruction. *The Elementary School Journal*, 89(3), 301–342.
- Pressley, M. (2002). *Comprehension strategies instruction: A turn-of-the-century report*.
- Pressley, M. with McCormick, C.B., (1995) : *Advanced Educational Psychology for Educator. Researchers and Policymakers*. HarperCollins.
- Putra, E. D., Cho, S. & Liu, J. (2017). Extrinsic and intrinsic motivation on work engagement in the hospitality industry: Test of motivation crowding theory. *Tourism and Hospitality Research*, 17(2), 228-241.
- Radovan, M. (2011). The relation between distance students' motivation, their use of learning strategies, and academic success. *The Turkish Online Journal of Educational Technology*, 10(1), 216–222. Retrieved from www.tojet.net/articles/v10i1/10122.pdf
- Richards, J. C., Platt, J., Platt, H. (1998). *Longman dictionary of language teaching & applied linguistics*. Pearson Education.
- Richards, J., Platt, J. & Platt, H. (1992). *Dictionary of language teaching & applied linguistics*. Kuala Lumpur, Longman.

- Richardson, M., Abraham, C. & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138, 353–387. <https://doi.org/10.1037/a0026838>.
- Richey, J. E., Bernacki, M. L., Belenky, D. M. & Nokes-Malach, T. J. (2018). Comparing class- and task-level measures of achievement goals. *The Journal of Experimental Education*, 86(4), 560-578. Doi: 10.1080/00220973.2017.1386155
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R. & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130, 261–288. <https://doi.org/10.1037/0033-2909.130.2.261>
- Rodríguez, M. A., Morales, N. M. & Manzanares, M. T. L. (2016). Learning strategies in relation to academic performance in a nursing degree: A case study. *Educational Excellence*, 2(1), 29-47.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in the social context*. Oxford University Press
- Romaine, S. (1995) *Bilingualism* (2^{ed} ed). Oxford, Basil Blackwell Ltd.
- Rosario, P., Nunez, J. C., Trigo, L., Guimaraes, C., Fernandez, E., Cerezo, R., Fuentes, S., Orellana, M., Santibanez, A., Fulano, C., Ferreira, A. & Figueiredo, M. (2015). Transcultural analysis of the effectiveness of a program to promote self-regulated learning in Mozambique, Chile, Portugal, and Spain. *Journal of Higher Education Research and Development*, 34(1), 173–187. Doi: 10.1080/07294360.2014.935932.
- Ruffing, S., Wach, F.-S., Spinath, F. M., Brünken, R. & Karbach, J. (2015). Learning strategies and general cognitive ability as predictors of gender-specific academic achievement. *Frontiers in Psychology*, 6. <https://doi.org/10.3389/fpsyg.2015.01238>.
- Scarcella, R. C. & Oxford, R. L. (1992). The tapestry of language learning: The individual in the communicative classroom. Heinle & Heinle.

- Senemoğlu, N. (2015). *Development, learning and instruction: From theory to practice* (24th ed.). Yargı Yayınevi.
- Shaffer, D. (2000). *Social and personality development* (4th ed.). Belmont, Thompson Learning.
- Shawer, S. F. (2016). Four language skills performance, academic achievement, and learning strategy use in preservice teacher training programs. *TESOL Journal*, 7(2), 262-303. Doi: 10.1002/tesj.202
- Shehzad, M. W., Razzaq, S., Dahri, A. S. & Shah, S. K. (2019). The association between reading selfefficacy beliefs and meta cognitive reading strategies among Saudi PYP students. *The Dialogue*, 14(2), 32–43.
- Shuell, T. J. (1986). Cognitive conceptions of learning. *Review of Educational Research*. 56, 411-436.
- Simsek, A. (2006). Bilissel stratejilerin ogretimi [Teaching cognitive strategies]. In A. Simsek (Ed.), *Icerik turlerine dayali ogretim*. 181-208. Nobel.
- Sizoo, S., Molhatro, N. K. & Bearson, J. M. (2003). Preparing students for a distance learning environment: A comparison of learning strategies of in-class and distance learners. *Educational Technology Systems*, 31(3), 261-273
- Skaalvik, E. M. (2018). Mathematics anxiety and coping strategies among middle school students: Relations with students' achievement goal orientations and level of performance. *Social Psychology of Education*, 21(3), 709-723. Doi: 10.1007/s11218-018-9433-2
- Skinner, B. (1972). Utopia through the control of human behavior. In John Martin Rich (Ed.), *Readings in the philosophy of education*. Belmont, CA: Wadsworth.
- Skutnabb-Kangas, T. (1984). *Bilingualism or Not, Multilingual Matters*. Clevedon
- Soule, S. N. (2013). *Official bilingualism in Cameroon: farce or reality?* The need for texts to govern official bilingualism in Cameroon. Yaounde.

- Spitzer, H. F. (1939). Studies in retention. *Journal of Educational Psychology*, 30(9), 641–656.
- Sugahara, S. & Boland, G. (2014). How accounting students define success, and the factors affecting their success and failure, while studying in The Accounting Schools of Japan. *Procedia –Social and Behavioral Sciences*, 141, 64-69.
- Tait, H. & Entwistle, N. J. (1996). Identifying students at risk through ineffective study strategies. *Higher Education*, 31, 97-116.
- Takaloo, N. M. & Ahmadi, M. R. (2017). The effect of learners' motivation on their reading comprehension skill. *International journal of research in English education*, 3(2) 10-21.
- Tan, R. E. (2019). Academic self-concept, learning strategies and problem-solving achievement of university students. *European Journal of Education Studies*, 6(2), 287–303. Doi: 10.5281/zenodo.3235652.
- Tariq, S. Khan, M., Afzal, S., Shahzad, S., Hamza, M., Khan, H. & Shaikh, S. (2016). Association between academic learning strategies and annual examination results among medical students of King Edward medical university. *Annals of King Edward Medical University*, 22(2), 124–134. Doi: 10.21649/akemu.v22i2.1290.
- Tay, B. (2013) Elaboration and organization strategies used by prospective class teachers while studying social studies education textbooks. *Eurasian Journal of Educational Research*. 13(51): 229-252
- Tokan, M. K. & Imakulata, M. M. (2019). The effect of motivation and learning behaviour on student achievement. *South African Journal of Education*, 39(1), 27-39
- Tomar, S. & Jindal, A. (2014). A study of effective learning strategies in relation to intelligence level across the science and arts academic streams of secondary level. *IOSR Journal of Research and Method in Education* 4(6), 41–50.
- Tomasello, M., Kruger A. C. & Ratner, H. H. (1993). Cultural learning. *Behavioral and Brain Sciences*, 16(1), 495-552.

- Topping, K. J. (1996). The effectiveness of peer tutoring in further and higher education: A typology and review of the literature. *Higher Education*, 32, 321-345
- Tudge, J. R. H. & Winterhoff, P. A. (1993). Vygotsky, Piaget, and Bandura: Perspectives on the relations between the social world and cognitive development. *Human Development*, 36, 61-81.
- Tulving, E. (1967). The effects of presentation and recall of material in free-recall learning. *Journal of Verbal Learning and Verbal Behavior*, 6(2), 175–184
- Tunçer, B. K. & Güven, B. (2007). Effects of learning strategies on academic achievement, students' recalling level and students' attitudes toward assigned courses. *Yuzuncu Yil University Journal of Education*, 4(2), 1-20.
- Ulstad, S. O. Halvari, H., Sørebo, Ø., & Deci, E. L. (2016). Motivation, learning strategies, and performance in physical education at secondary school. *Advances in Physical Education*, 6(01), 27.
- Üzbe, N. (2013). *The role of achievement goal orientation, self-esteem and academic achievement in prediction of self-handicapping* [Unpublished master's thesis]. Gazi University, Ankara.
- Valdes, G. & Figueroa, R.A. (1994). *Bilingualism and Testing: A Special Case of Bias*. Ablex Publishing.
- Varasteh, H., Ghanizadeh, A. & Akbari, O. (2016). The role of task value, effort-regulation, and ambiguity tolerance in predicting EFL learners test anxiety, learning strategies and language achievement. *Psychological studies*, 61(1), 2-12
- Vega-Hernandez, M. C., Patino-Alonso, M. C., Cabello, R., Galindo-Villardón, M. P. & Fernandez-Berrocal, P. (2017). Perceived emotional intelligence and learning strategies in Spanish university students: A new perspective from a canonical non-symmetrical correspondence analysis. *Front Psychology*, 8. Doi: 10.3389/fpsyg.2017.01888.

- Vettori, G., Vezzani, C., Bigozzi, L. & Pinto, G. (2020). Upper secondary school students' conceptions of learning, learning strategies. *The Journal of Educational Research*, 113(6), 475–485. Doi: 10.1080/00220671.2020.1861583.
- Vygotsky, L. S. (1978). *Mind in Society: The development of higher psychological processes*, MIT Press.
- Vygotsky, L. S. (1986, edited and translated by A. Kozulin). *Thought and language*. MIT Press
- Wade, S. E. & Trathen, W. (1989). Effects of self-selected study methods on learning. *Journal of Educational Psychology*, 81(1), 40-47
- Wallner, K. (2016). *The Effects of Bilingualism on Language Development of Children. Communication Sciences and Disorders: Student Scholarship & Creative Works*. <https://digitalcommons.augustana.edu/cgi/viewcontent.cgi?article=1004&context=csdstudent>
- Warr, P. & Allan, C. (1998) Learning strategies and occupational training. In C. L. Cooper and I.T. Robertson. (Eds). *International Review of Industrial and Organizational Psychology*. pp.83-121. Hoboken, Willey.
- Warr, P. & Downing, J. (2000). Learning strategies, learning anxiety and knowledge acquisition. *British Journal of Psychology*, 91(3), 311-333.
- Washburn, E. Sielaff, C. & Golden, K. (2016). The use of a cognitive strategy to support argumentbased writing in a ninth grade social studies classroom. *Literacy Research and Instruction*, 55(4), 353-374. Doi: 10.1080/19388071.2016.1165319
- Weinreich, U. (1952). *Languages in contact*. Mouton
- Weinreich, U. (1968). *Languages in contact: Findings and problems*. Mouton
- Weinstein, C. E. & Hume, L. M. (1998). *Study strategies for lifelong learning* (1st ed.). American Psychological Association

- Weinstein, C. E. & Mayer, R. E. (1986). The teaching of learning strategies. In M. C. Wittrock (Ed.), *Handbook of research on teaching*. (3rd ed), pp. 315-327. Macmillan Company.
- Weinstein, C. E. & Underwood, V. L. (1985). Learning strategies: The how of learning. In J. W. Segal, S. F. Chipman, & R. Glaser (Eds.). *Thinking and learning skills Volume 1: Relating instruction to research*. 241–258. Lawrence Erlbaum Associates
- Weinstein, C. E. Schulte, A. C. & Palmer, D. R. (1987). *The Learning and Study Strategies Inventory*. H&H Publishing.
- Weinstein, C. E. Zimmerman, S. A. & Palmer, D. R. (1988). Assessing learning strategies: The design and development of LASSI. In C. Weinstein, E. Goetz, & P. Alexander (Eds.), *Learning and study strategies: Issues in assessment, instruction, and evaluation*. Academic Press.
- Weisburg, M. & Ullmer, E. J. (1995) *Distance learning revisited: life-long learning and the National Information Infrastructure Proceeding of the 1995 Annual National Convention of the Association for Educational Communications and Technology Anaheim, CA: ERIC Document Reproduction Service*
- Wild, K. P. & Schiefele, U. (1994). Lernstrategien im studium: Ergebnisse zur faktor- enstruktur und reliabilität eines neuen fragebogens [Learning strategies of university students: Factor structure and reliability of a new questionnaire]. *Zeitschrift Für Differentielle Und Diagnostische Psychologie*, 15(4), 185–200.
- Wittrock, M. C. & Alessandrini, K. (1990). Generation of summaries and analogies and analytic and holistic abilities. *American Educational Research Journal*, 27(3), 489-502.
- Wood, D. (1998). *How children think and learn* (2nd ed.). Blackwell.
- Yıldız, N. (2003). *The effect of teaching learning strategies on the academic success and recalling levels of the 5th grade primary school students in the science course* [Unpublished master's thesis]. Anadolu University, Eskişehir

- Yorulmaz, E. (2001). *The impact of learning to learn strategies on pupil's success in social studies courses in primary education* [Unpublished master's thesis]. Çanakkale Onsekiz Mart University, Çanakkale
- Zimmerman, B. (1990). *Self-Regulated Learning and Academic Achievement: An Overview*. Vol. 25. https://doi.org/10.1207/s15326985ep2501_2
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329–339.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41, 64–70. https://doi.org/10.1207/s15430421tip4102_2.
- Zimmerman, B. J. & Kitsantas, A. (2005). Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. *Contemporary Educational Psychology*, 30(4), 397-417.
- Zimmerman, B. J. & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of Educational Psychology*, 80(3), 284–290.
- Zimmerman, B. J. Pons, M. M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal*, 23(4), 614-628.
- Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory and Practice in Language Studies*, 3,254-262. <http://dx.doi.org/10.4304/tpls.3.2.254-262>.

APPENDIXES

REPUBLIQUE DU CAMEROUN

Paix – Travail – Patrie

UNIVERSITE DE YAOUNDE I

CENTRE DE RECHERCHE ET DE
FORMATION DOCTORALE EN
SCIENCES HUMAINES, SOCIALES
ET EDUCATIVES

UNITE DE RECHERCHE ET DE
FORMATION DOCTORALE EN
SCIENCES DE L'EDUCATION ET DE
L'INGENIERIE EDUCATIVE



REPUBLIC OF CAMEROON

Peace – Work – Fatherland

THE UNIVERSITY OF YAOUNDE I

POST GRADUATE SCHOOL FOR SOCIAL
AND EDUCATIONAL SCIENCES

RESEARCH AND DOCTORAL TRAINING
UNIT FOR SCIENCE OF EDUCATION
AND EDUCATIONAL ENGINEERING

QUESTIONNAIRE

To the respondents,

I wish to inform you that I am a master II student at the University of Yaoundé I pursuing a post graduate program in fundamental studies in education, the faculty of education. As partial fulfillment of the program, I am researching on student learning strategies and bilingual education achievement in university of Yaoundé I, the faculty of education. Your response will help me to generate appropriate data for the study. Please feel free to express your opinions as frankly as possible and be rest assured that any information given shall be strictly used for academic purposes. Your contributions will be highly appreciated, and answers would be kept highly confidential. These questions will take you approximately 30 minutes to fill.

Thanks for your cooperation.

Direction: kindly fill up the following, put a check mark (x) on the following information which implies to you. Use the rating scale in accessing students learning strategies in bilingual education achievement.

Sex: Male Female

Language: French English Bilingual

5- STRONGLY AGREE 4- AGREE 3- NEUTRAL 2- DISAGREE 1- STONGLY DISAGREE.

TABLE A

Items	5	4	3	2	1
Self-motivation					
I get motivation from myself to achieve bilingual learning objectives					
I am inspired by other people, parents, friends, academic staff to study in English and French					
I am encouraging from success in specific courses to be bilingual					
I am encouraged from good marks on assignments and projects to study bilingual education					
I get motivation from studying for perfect bilingualism					
The love for particular subjects pushes me to learn in French and English					
Specific topics motivates me to study in French and English					
I am moved from class study group discussion, to learn in both languages					
Student interaction					
I do not have difficulties interacting with classmates to study in either French or English					
I enjoy interacting with classmates for clarification on course information in English					
I enjoy interacting with classmates for clarification on course information in French					
I only interact during group assigned task in French					

I only interact during group assigned task in English					
I like interacting with classmates for assignment from French lecturer					
I like interacting with classmates for assignment from English lecturer					
I am not interested at all to interact with classmates because of language barrier					
Personal efforts					
I attend lectures regularly and I take down note in either French or English					
I attend lectures but I do not take down note in French					
I attend lectures but I do not take down notes in English					
I seek for further French course explanation in English					
I seek for further English course explanation in French					
I search all the necessary information and materials when studying in both languages					
I am always present but, not attentive in class because of language barrier					
I consult a translated version of a dictionary or encyclopedia when studying in French and English					
I change the way I study for exams or test in French					
I change the way I study for exams or test in English					

TABLE B

Bilingual learning achievement					
I learn and understand lectures in both French and English					
I only understand lectures in French					
I only understand lectures in English					
I have a complete course mastery in both languages					
I have a good course mastery in French and in English					
I have a good course mastery in English than in French					
I perform better in French courses than in English courses					
I perform better in English courses than in French courses					
I perform well in both French and English courses					
I succeed in exams and tests in both English and French					

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